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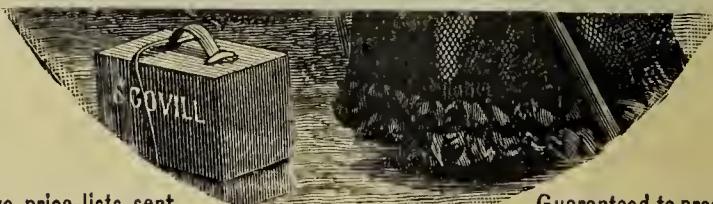
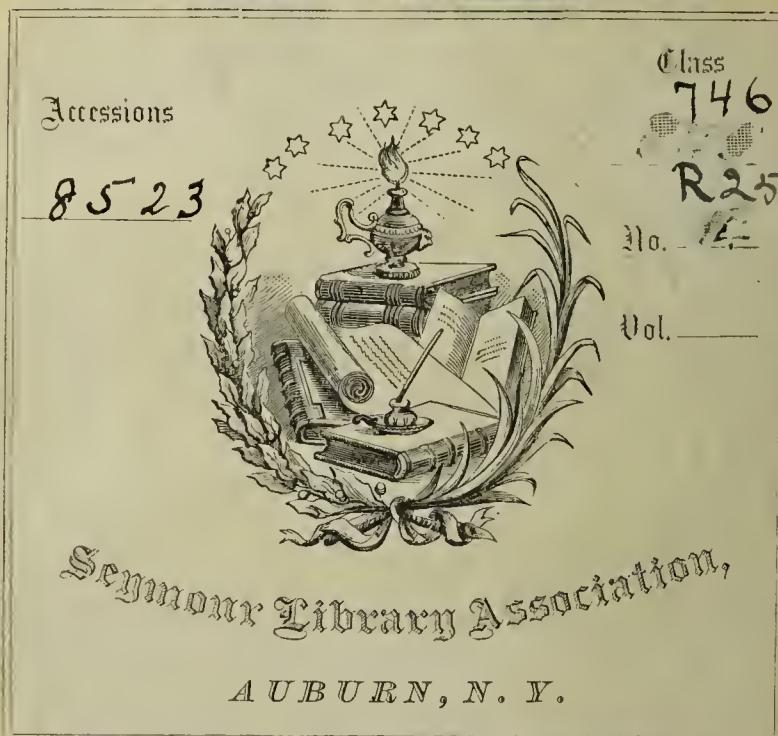
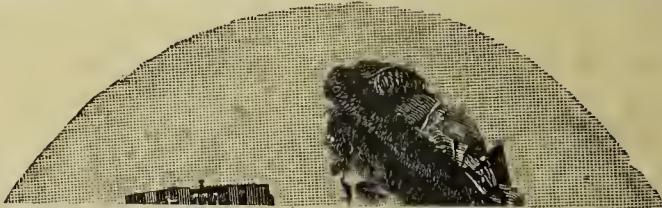
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HOME OCCUPATIONS.

I.

INTRODUCTORY.

“THE human mind,” says Cicero, “ever longs for occupation,” and no one will be disposed to question the truth of his assertion. Its practical application is familiar to us all. “Give the child something to do if you want to keep him quiet,” is nurse’s dictum for the management of a troublesome youngster, and every mother knows how essential it is to provide occupation for boys and girls if there is to be peace in the house. And that which is true of the younger members of the household is true of us all. Occupation of some kind is a necessity.

“The human heart is like a mill that goeth round and round;
If it hath nothing else to grind, it must itself be ground.”

And thus it comes to pass that, apart from the active business and enjoyments of life, there is a vast field for light occupation; and, while we agree with Shakespeare that “pleasure and action make the days seem short,” we recognize how many hours there are in every day which, in ordinary lives, are not spent in the active pursuit either of business or amusement, and which must be filled up in

some way. Our object in this little book, therefore, is to offer practical suggestions for making that way a pleasant one ; one that shall be, at the same time, more satisfactory than the mere exciting chase of amusement, and less irksome than the monotonous pursuit of compulsory employment.

Reading would naturally suggest itself as an occupation more largely indulged in than any other in leisure hours ; but that is a matter which must be dealt with in one of two ways—either *in extenso*, as being of grave import, with the object of self-improvement, or as a matter of mere inclination and amusement. In either case it does not come within the scope of our intention, and the same may be said of accomplishments. We limit ourselves, therefore, to those occupations in which agreeable employment for leisure hours can be found, and which shall be productive of pleasant results, either in the shape of pretty things fashioned by clever fingers, or of valuable knowledge acquired in the pursuit of some favorite “hobby.”

II.

SHOWING WHAT CAN BE DONE WITH LEATHER.

LEATHER-WORK has much to recommend it as an occupation. Easy to learn, it is clean to work upon, and economical, as it neither chips nor breaks ; heat and moisture have no effect upon it, and the older it grows the better it is. In addition to these merits, leather can be fashioned into so many pretty things that time spent upon it is well bestowed, and the only wonder is that it is not considered absolutely indispensable in modern homes.

In these days of revival it is interesting to learn that working in leather was a familiar occupation with the ancients. The British Museum possesses specimens of embossed leather made by the Egyptians nine hundred years B. C., and an ornamental cross, very finely wrought in leather, which is said to have belonged to a Coptic priest, 640 A. D., is also to be seen there.

Before entering upon a description of the many beautiful and elaborate articles which can be made of this material, we will give a few practical suggestions for beginners in the art, and advise them, before they commence operations, to provide themselves with the following materials :

Two kinds of skins, thick and thin, known, respectively, as basil-skin and skiver-skin ; molds or shapes for berries, grapes, and funnel-shaped flowers; molding-tools and wooden pestles ; wire, and nippers for cutting it ; a hammer and

scissors, a knife, and a small bradawl for piercing ; a tool for veining the leaves, and several sheets of glue, which latter must be soaked for a number of hours, then heated gradually, and kept very hot while in use.

Basil-skin is the name given to sheep-skin when it is tanned, and skiver is the term used for the soft pieces cut from the edges when it is trimmed, or the shavings from the currier's bench. Both can be bought of a dealer in leather, while the tools required for this work are kept at stores where the materials for wax-work are sold. A plain deal board is needed to cut the leather upon, for veining the leaves, etc.

The easiest thing for a beginner to attempt in leather-work is to copy a spray of ivy. It is always best to copy from nature itself. Not only are much better effects produced by this means, but a great deal of useful information is gained as to the construction of flowers, etc.

The first necessity is an accurate outline of the spray, and this is easily gained by simply putting it on paper and outlining it in pencil ; and this having been done, the veining of each leaf should be copied as nearly as possible. The pattern thus obtained must be laid perfectly flat and smooth upon the leather, and cut out in the material the entire length of the spray.

By laying the leather and pattern together upon the board, and holding them firmly, the outline can be accurately cut with a knife, and by continuing to pare away the under side of the leather, both leaves and stalks will be thinner at the edges. The next thing to be done is to moisten the leather thoroughly, either by dipping it into cold water or by wetting it on the surface with a sponge until the moisture penetrates it sufficiently to allow of its being readily molded into any shape which may be desired.

In order to produce the effect of veins, the veining-tool must be firmly pressed on to the upper side of the leather, and

then drawn sharply along and across it with sufficient force to give the markings of the real leaf distinctly. The raised middle vein is made by double lines. When all the veins are accurately marked as in nature, the next operation is to curl and model the leaves into shape. A leaf of the leather spray must be taken in the left hand, and the under part of it pressed with the thumb and second finger of the right hand, while the forefinger presses it on the top, so that the leather is well pushed up between the veins and the edges curl over. The stems and stalks are then laid on the board face downward, and rolled with the palm of the hand until they are perfectly rounded. The leather itself, when rolled, is sufficiently firm, and will not usually require wiring, and when perfectly dry it will be found that the leaves retain their shape, as well as all the impressions given by the veining-tool. But, if it is deemed desirable to make them still stiffer and firmer, it may be well to put a coating of glue over the under part of the leaves, and to glue up the stems into close round stalks. For the berries which are probably on the ivy-spray the smallest molds come into use, and small circular pieces must be cut from the thinnest part of the leather and pushed into the little round holes in the molds, and then turned quickly round and round by the smallest pestle. It will be necessary to moisten them thoroughly before pressing them into the molds. After a while they can be carefully pulled out again and left to dry, after which they require trimming, and may be glued on to the circles left ready for them on the spray. All berries, grapes, and small fruits are made in this way. The spray, when now so far completed, is ready for mounting upon a foundation of wood. In all probability the leaves will not be close enough to conceal the surface of the wood entirely, and therefore it is desirable to cover it by stretching a piece of thin skin completely over it. The ivy-spray may then be placed in position, and, to keep it steady until it can be

glued, long pins or furniture-tacks are passed through the stem and leaves and hammered firmly into the foundation, thus securing it until it can be glued, when the nails can either be removed by the pincers or the heads broken short off, the points being left in for further security. If these directions are faithfully followed, the first attempt at leather-work will prove so successful that a more ambitious one will quickly be made.

It is most important in all operations in leather-work to keep the glue very hot all the time it is in use, and to ascertain the exact consistency required ; for if it is too thick it will not spread smoothly, and if too thin it is apt to run over and stain the work, and glue stains are of all things to be deprecated, especially where staining and varnish are not resorted to, and the leather is left in its original color. The latter method will be found the most satisfactory, as upon exposure to the air it becomes of a very artistic color, which deepens with time.

If the ivy-spray is satisfactory as the result of a first attempt, a second to reproduce holly will prove no less so. In this case the very same method is to be pursued, with the single exception of pinching up the leaves to give them the pointed, prickly appearance desired, instead of curling and rounding them.

Such simple experimental work will have familiarized the beginner with the use of the implements, and accustomed the fingers to the manipulation of the material, and something more complicated may now be attempted.

From leaves to flowers the transition is easy, but even simple flowers are somewhat complicated. Perhaps a rose will prove as easy as any to begin upon. In making it there are four distinct elements to consider—the corolla with the petals, the calyx, the seed-pod, and the accompanying leaf. To form the corolla, five circles should be cut out, two a little smaller than the other three, and each

must be scalloped in five divisions, to represent the petals ; each division requires veining down the center (see Fig. 1 (1)), and must have a small hole in the very middle of each circle. The petals must be modeled in the hand with

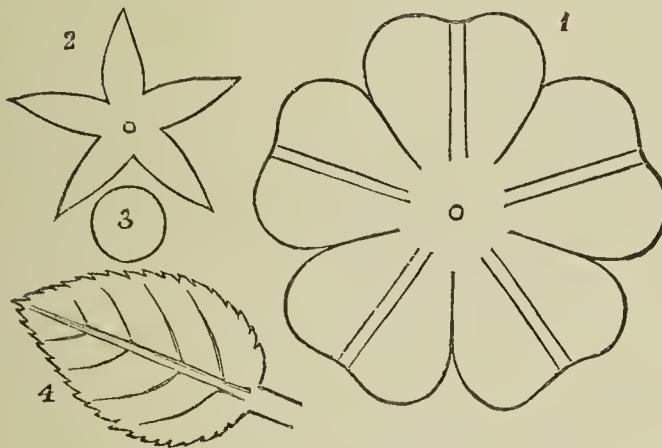


FIG. 1.—LARGE ROSE.

1, Petals; 2, Calyx; 3, Seed-Pod; 4, Leaf.

a molding-tool until they are rounded like those in nature ; the smallest of the circles of leather is then closed up and the petals glued together, the edge of one being always placed over another, and the circles so modeled by the fingers that all but two of the larger ones are hollowed in the inner side ; these two are molded so as to turn back, and are not so much hollowed as the others. The rose, being so far formed, is now connected with the stalk by passing the latter through the small circle left in the center of the petals and attaching a little knob to form a head, so that it will remain in place, and the petals must then be glued on to the inner circles. The calyx, cut out as in (2), Fig. 1, is next slipped up the stalk, and the round piece (3), to form the seed-pod, follows. Leaves (4) are easily cut out on the spray, and buds are formed by taking circles of three or five petals glued together and placing them in a calyx and seed-pod. Little sharp, triangular pieces of leather, doubled up

and stuck on the stalk at intervals, represent thorns, and ingenuity soon finds out new manipulations to add to the likeness to the flower; but the main point will still be in the molding and shaping of the petals. A spray of roses with buds and leaves makes a pretty decoration for a picture-frame.

Yet it may be said that a rose presents more difficulties than the morning-glory, as for this flower a molded form can be bought, and it has no complex arrangement of inner leaves. The form of the flower is cut out as in Fig. 2, the skiver well moistened, and pressed into the mold with the pestle in the right hand, while with the left every possible wrinkle is smoothed out. The leather is then cut quite close

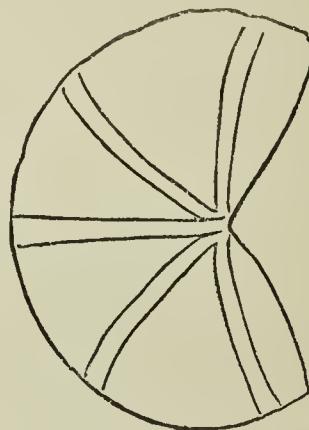


FIG. 2.—FLOWER OF CONVOLVULUS MAJOR.

round the edge of the mold and left to dry, and when that operation is completed it is removed from the mold and glued on to the stalk. It is best to cut a separate spray of stalks for the flowers, buds, and tendrils, snipping the points of the flower-stems into stamens cut very thin and curled while wet, and twisting the buds up into points. Of course, the stems and tendrils must be rounded while wet, and the latter, if twisted round a pencil, will assume the coiled appearance which is necessary. When dry, the stamens are

pulled through the flower, the calyx modeled into shape and pushed up the stalk, and all are firmly glued together. The flower-spray is turned round a spray upon which leaves have been arranged, and the two sprays can be mounted together. The introduction of wire into the stems and stalks is almost always an improvement, as it makes it easier to twist the spray as may be desired.

The great attraction in leather-work is the possibility it affords of producing effects in relief. For this reason it is admirable for the decoration of brackets, and, if skillfully done, may compare with the finest wood-carving. Berries, fruits, and even birds, are successfully copied in this material, and, as a most appropriate sample of the kind, we will suppose a corner bracket which is to be decorated in leather, and select for the purpose a vine-branch with a bunch of pendent grapes. This will present very few difficulties to those who have successfully modeled the rose and morning-glory. The broad strip of leather selected for the stalk must be deeply veined, folded, and twisted (Fig. 3 (1)), and it will be found better to stuff it with wool tightly twisted round with wire, so that it shall afford a substantial surface to be covered with leather; from this parent stem the leaves and fruit must depend, and the easiest way will be to cut out the leaves at the same time as the branch, so that, when folded, the stems may appear to grow naturally out of it. Little wooden molds of light wood are required for the grapes, and these are readily obtained; they are covered with well-moistened skiver, which is drawn very tightly round them and tied firmly with cotton at the stalk end. (See Fig. 3 (3).) When they are quite dry, the cotton is taken off and the leather cut away, so as to leave a smooth point ready to glue to the stalk or bunch, as the ease may be. If the grapes are not to hang down, they are made *in* the molds, like berries, and when taken out are glued on to a piece of leather, the lower ones concealing the foundation,

and the others being placed on one above the other, so as to form a complete bunch of different sizes. Great care is

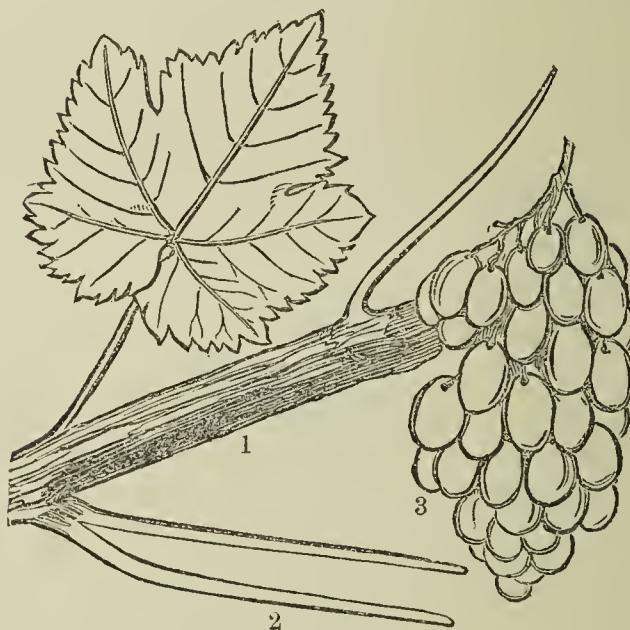


FIG. 3.—VINE LEAF AND STALK.
1, Stalk ; 2, Tendrils ; 3, Hanging Grapes.

needed in modeling, veining, and rolling the leaves and tendrils of the vine, and much of the natural effect of the clustering vine will depend upon the way in which this is done. If the bracket for which this effective decoration is intended is in walnut or any dark wood, it may be necessary to stain and varnish the leather, in which case burnt umber will furnish the right color, and copal will make excellent varnish.

The staining and polishing of leather to imitate various woods is an important branch of the subject, and one that can be learned without much difficulty. One or two coatings of size must first be laid on with a thick brush and allowed to dry, then the coloring matter (oil-paint in tubes, a preparation known as "tints," sold for the purpose) is

carefully put on with a stiff-pointed brush, and the whole finished off with a coating of varnish which will dry quickly ; those varnishes known respectively as Japan and copal are the best. Many authorities upon leather-work advise rubbing the surface all over with pumice-stone or fine sand-paper before varnishing it. If it is intended to imitate rosewood, Venetian-red scalded in vinegar, or Vandyke-brown mixed with crimson, to be applied with a fine brush, will give the desired tone ; if walnut-wood, as we have said, burnt umber will be found most satisfactory, while for old oak, a stain is sold by that name which is highly effective. Some workers find that ordinary glue is not so good in the using as size made at home in the following way : Two ounces of Australian red gum, six ounces of orange shellac, and half a pint of spirits of wine should be mixed together, put into a bottle and corked tightly. The mixture should be constantly stirred until all the gums are dissolved, when it should be strained and rebottled.

Ornamenting leather in color and gilding are difficult processes, for which powdered colors, gold and silver foil, and bronze powders are required. To mix the powdered colors the white of egg and a little white vinegar should be used, or, if preferred, parchment size, gelatine, or gum arabic in solution will serve equally well. When the colors are dry, a very thin coating of varnish must be given. For gilding, the gold-leaf is laid on and pressed into the leather with a veining-tool, or laid on with gold-size, as in gilding wood. It is, however, very difficult either to gild or bronze leather, and in most cases we should advise its being left in the natural color, or simply stained.

It is difficult to give suggestions for the arrangement of complicated designs in leather-work, as so much depends upon the use for which they are intended. If to decorate picture-frames, for example, there is always the further question of the subject of the picture to be considered.

Supposing it to be sacred, the passion-flower is appropriate for scenes of the crucifixion, while the vine, the lily, and the rose can be fitly introduced into frames for allegorical subjects; and for pictures of children, daisies and field-flowers are always suitable. Of those mentioned, the passion-flower alone presents any very great difficulties, and these can be overcome by a careful observance of directions and attention to the accompanying diagrams. The passion-flower is very complex, and it will simplify matters to understand thoroughly, before commencing it, the various portions of which it is composed. (See Fig. 4.) First we have

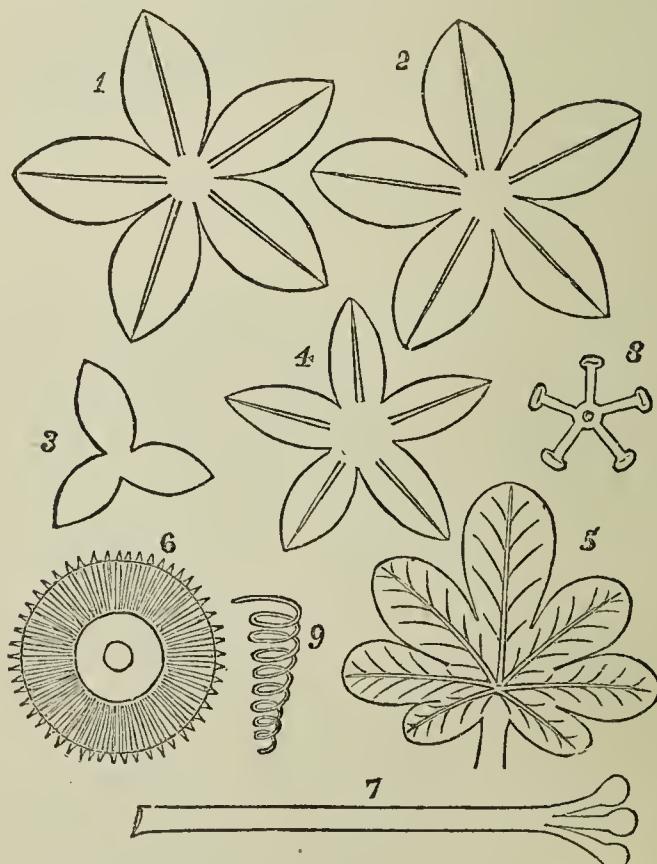


FIG. 4.—PASSION-FLOWER.

1, Corolla; 2, Calyx; 3, Involucre; 4, Bud; 5, Leaf (largest size); 6, Radiance; 7, Pistil; 8, Stamens; 9, Tendril.

the corolla, with five petals (1); the calyx (2), with five points; the involucre; in form of a triangle (3); the radiance (6), the pistil (7), the stamens (8), and, accompanying the flower, leaves (5), tendrils (9), and buds (4). The corolla must be cut out first, in one piece with five divisions; then the calyx, in another similar one, somewhat smaller; both must be veined, molded, and pinched into shape. The stalk must be cut into three divisions at the top, which are rolled back and curled to form the stigma of the pistil. The stamens are cut in one piece, of five points, each point being rolled back at the end and pressed together to form the anthers. A round, cut in the thinnest possible leather, forms the radiance; it is fringed by finely cutting in delicate strips nearly to the circle, as shown in Fig. 4 (6), while the inner part of the round must also be cut out. A thin strip of leather is rolled round the stalk below the stigma, and the stamens must be pushed up to this and glued under it; the stalk is then passed through the radiance (which should be glued to it at a little distance below the stamens), and so, in turn, through the corolla, calyx, and involucre, each of which must be firmly attached to the stalk and the piece above it, and arranged according to nature. To form the buds, small corollas with five petals are cut out, and the petals glued together, while afterward an involucre is attached to each bud. For the foliage, several leaves can be cut out on one spray, interspersed with tendrils, which must be twisted and rolled into coils. It adds to the appearance of the wreaths if the leaves differ in size; none of them should be larger than that shown in our plate (5). It will be seen at once that the successful construction of a passion-flower will need care, time, and patience; but all these will be amply rewarded by the result. The flower is effective when finished, and the foliage, with the many tendrils, very decorative.

In contrast with the difficulties surmounted in the

making of this flower, we have the easily manufactured fern-leaf. In this, at least, the only difficulty would be in such delicate manipulation as should make the recognition of distinct specimens possible. (See Fig. 5.) For the ordinary leaf it is only necessary to cut the form out in thin skiver, in one frond, and place a rolled stalk, with wire in it, down the middle of the back to keep it in shape. The seeds in the



FIG. 5.—FERN-LEAF.

polypody are imitated by punching the frond at the back, so as to raise the surface in front. Leaves, of course, will always present fewer difficulties than flowers, and yet, to a keen observer of nature, they offer a wide field, for there is as much distinctive character in them as in the most varied blossoms, and in many cases they produce a better result. An oval frame decorated with oak-leaves, for example, is very pretty, the introduction of acorns enhancing the effect. Such a frame could be made entirely at home, by simply

forming two pieces of thin wood, one somewhat smaller than the other, in oval shape, as outer and inner edge, and making a foundation of trellis-work between them, of fine sticks laid one across the other, and glued at either end. The frame, so simply made, can be stained to imitate old oak, rubbed smooth and polished, and the decoration could consist of a wreath of oak-leaves, of different sizes, cut while damp from thin skiver, and either pressed upon molds, if such are possessed, or veined, curled, and shaped by hand. The acorns are best made by obtaining real ones and covering them tightly with skiver, the cups being formed of leather, snipped, cut, and pinched, to give a rough appearance. If real acorns are not at hand, models from them must be cut out in halves in the leather, molded, stuffed, and glued together. Generally speaking, half an acorn is sufficient, glued on to the background ; but, where the appearance of hanging is desired, each must necessarily be perfected, and suspended by a small stalk to the oak-spray. When finished, the wreath must be well sized over,

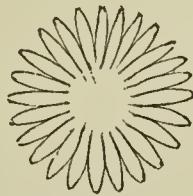


FIG. 6.—DAISY.

dipped into the oak-stain, and varnished, and then fastened securely on to the frame by furniture-tacks.

Wreaths of more simple flowers are pretty to crown photograph-frames. For example, little stands intended to hold two or more portraits are much improved by the addition of a few flowers, either as a center bouquet or a wreath, and, if they are stained of the same color as the wood of which the frames are composed, it will require an accurate

observer to detect the material of which they are made. Daisies are cut out in one circular piece (Fig. 6), with many points to represent the florets, each of which is pared at the ends and veined underneath, to give the appearance of a rib in the center. The raised center of the flower is made of a round piece of leather, a little hollowed and pricked up, to represent the compact mass of yellow in the natural daisy. The forget-me-not is still more simple. It consists of but one piece, cut with five petals, and a thin stalk, a little bent and pressed at one end, that it may be firmly fastened into the blossom.

Next in order of simplicity comes the fuchsia (Fig. 7), with its four-petaled corolla (1) and four-pointed calyx (2),

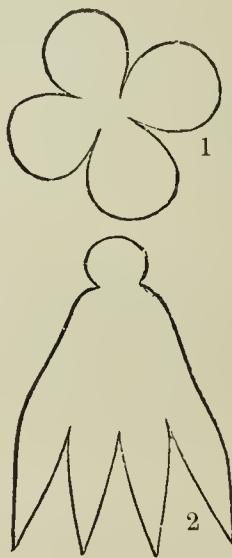


FIG. 7.—FUCHSIA.

1, Corolla ; 2, Calyx.

the pistil and stamens being simply cut upon the stalk and rolled and bent at the ends to form the stigma and anthers.

Before proceeding to a consideration of the fruits which are easily imitated in this material, we must not forget to mention one most graceful climbing plant—namely, the

hop—which is very suitable for decorative purposes. Hops are particularly pretty if arranged in clusters of six or seven cones, with a few leaves, very much and deeply veined, to form a pendent ornament. To make the hops, five or six triangular pieces should be cut out, as in Fig. 8 (1), for the

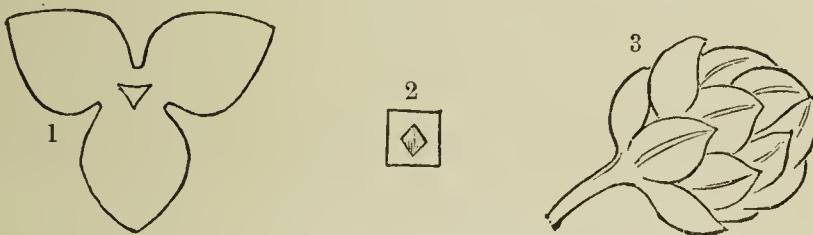


FIG. 8.—HOPS.

1, Large Hop; 2, Square of Leather; 3, Perfect Hop.

large ones, and smaller pieces the same shape for the lesser ones, placing between each little squares of leather (2). When they are fitted together they all appear of the same size in the perfect hop (3), the three divisions which form the top of the cone being glued together on the stalk, and the others pushed up and glued between them, a square between each keeping them in shape.

Fruits of all kinds can be admirably reproduced in leather. The larger ones—such as apples, oranges, melons, pears, etc.—are usually made over molds bought expressly for the purpose, and which are cast in gutta-percha or plaster of Paris. They are always in two pieces, and each half has to be separately molded and stuffed while wet. Two fruits, however, we may mention as requiring different treatment—the pomegranate and the pineapple.

The former (see Fig. 9) is made in eight compartments (1), joined together round a ball formed of cotton stuffing covered with skiver, an opening being left to show the seeds (2), which are molded in little oval molds and glued on in strips. A piece of leather cut into tiny Vandykes is laid

round the top of the ball to form a crown, and this is done before the compartments are placed in position.

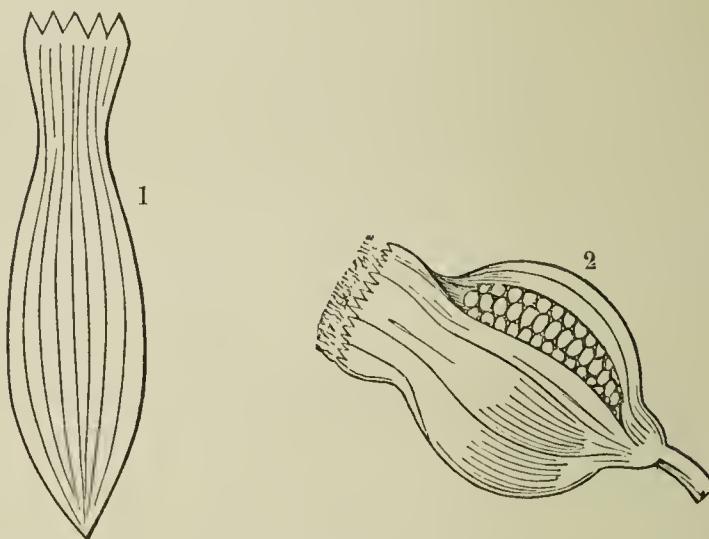


FIG. 9.

1, Compartment of Pomegranate ; 2, Appearance of Pomegranate when Finished.

The foundation of a pineapple is also a round ball of leather, but it is covered with spines and scales, pinched and molded into shape when glued upon it, to give the appearance of the conical erections of the fruit. Small leaves much notched at the edges form a tuft for the crown, while the leaves which surround the cone are folded back at the ends, to show the under side.

Architectural designs are often very well reproduced in leather, and we will call the attention of amateurs to one with which all students are familiar—the acanthus-leaf, namely, with the accompanying pod (see Fig. 10). It requires to be very deeply veined, and a broad veining-tool is a great assistance in marking it. The pod (2) is formed of nine pieces of leather cut in long oval shapes, curved over and laid side by side upon a foundation ball, an open space being left at one side to show the seeds, which are

molded in small oval molds and glued on in parallel rows. The shape of a section of the leaf is also given (1).

A little practice and careful observance of architectural designs will soon enable any one who is familiar with leather-work to execute intricate designs ; but, generally speaking, a knowledge of the methods for making flowers and fruit is sufficient for home occupation. The pointed Gothic molding which is suitable for frames beneath the

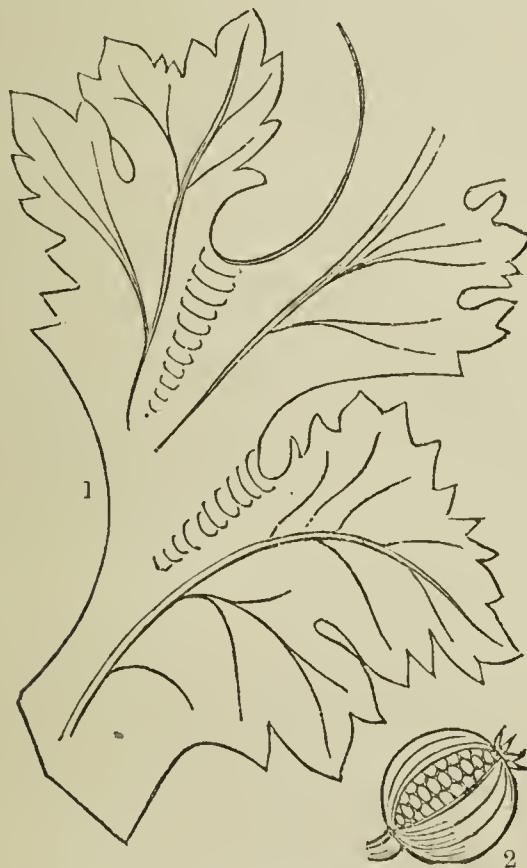


FIG. 10.—ACANTHUS.

1, Portion of Leaf; 2, Open Pod.

leather flowers and leaves is made by taking double folds of leather, cut in long strips and pinched at intervals ; and while still moist these folds should be stretched on the board

to the shape they are wanted, and then firmly pinned in that position until they are thoroughly dry. Every kind of scroll and arabesque pattern can be imitated in this manner with tight rolls of leather made in the same way as stalks and stems, and twisted into shape while wet. Birds are imitated by stretching skiver over models, or by cutting out the desired shape in two pieces, stuffing it, and gluing it together; wings, feathers, etc., being reproduced by pinching the leather, snipping and molding it as may be required.

The suggestions given sufficiently indicate how many opportunities are afforded for the use of leather-work. Picture-frames, brackets, boxes, screens, cabinets, and all articles of furniture which are ornamented by carving, can be equally well decorated in this material. Moreover, fret-



FIG. 11.—FRET-WORK IN LEATHER.

1, 2, Designs for Brackets.

work carving, which has become so popular, can be exactly reproduced in leather. But this material, if intended for such a purpose, must be of double thickness, and, to insure accuracy of outline, each portion must be cut out in duplicate, and afterward glued together firmly and evenly.

If, for example, a bracket were the object selected to be made in leather fret-work, each portion must be cut out in two separate pieces, which can then be glued together back

to back, so that each side would present a smooth surface. Fig. 11 (1, 2) gives simple designs for backs, and the support should be of the same pattern as the back. The easiest way to make the support would be to fold a pattern for the back-piece directly down the middle, one half of which would be the correct size for the support. The shelf should be semicircular and cut in thin wood, which could be covered on both sides with skiver. A little practice will suggest endless designs, moldings, etc., for the ornament, and after a while elaborate groupings of fruit, leaves, or flowers will follow as decoration.

Skiver is admirably adapted for smaller designs—leaves and simple flowers—but for larger work basil-skin is necessary, as skiver is very thin, and usually only obtainable in small lengths.

Wood used for foundations should be light; for which reason deal or beech are good for the purpose, while oak is too hard, and can not be easily worked upon.

One caution may be given to all ambitious workers in leather: Avoid overcrowding; it spoils the effect, and a great deal more is accomplished by the judicious arrangement of well-made flowers, leaves, and fruit, than by a medley in which no distinct intention can be discerned.

III.

THE POSSIBILITIES OF TISSUE-PAPER.

IT is surprising to find how much can be done by the use of the simplest means. A pair of sharp scissors in clever fingers can so manufacture flowers and other articles out of tissue-paper that it would require close examination to detect the material of which they are made ; and there is no pleasanter occupation than that of thus creating pretty things, and watching them grow into beauty under the hands.

For a worker who sits down with the deliberate intention of manufacturing something desirable out of tissue-paper, a few articles for use are indispensable, but they are all inexpensive, and can be easily obtained at the nearest fancy store.

We will enumerate those that are absolutely necessary. The finest colored paper is known as French tissue (although it is in reality of English manufacture, and exported directly from that country) ; it is sold in sheets of all colors, and is best bought in quantities, costing about sixteen cents a quire. Glazed paper is more expensive, but less of it is required, it being mainly used for foundations, and, in flower-making, for calyxes, involucres, etc. Stamens, pistils, and calyxes can all be bought ready made for any flower that is desired ; but we would advise our readers to make them with their own hands, first, because in doing so they will feel a greater interest in their work, and also because, after

a little practice, the home worker will make these portions of a flower appear more natural than those that are manufactured wholesale. Next in importance to the colored paper itself are the little tools with which it is to be manipulated.

Molding-tools, curling-pins, and ball-tools of different sizes; crimping-tools, and a pair of wooden goffers; scissors, wire of different sizes, a pair of tweezers, and a brick pin-cushion, are all easily procured. Gum tragacanth or arabic, starch in powder, assorted colors also in powder, and raw cotton, complete the list.

The best way to make any artificial flower successfully is to copy it directly from nature; and, in order to do so, it is best to begin, whenever it is possible, by dissecting real flowers and reproducing the exact forms piece by piece. After taking a pattern of a flower in this way, each separate portion should be marked with its name, and an account kept of the number of petals, shape of pistils, calyx, etc. More than three folds of paper should never be cut at once, as it is impossible to keep the edges even if more are attempted, and, besides that, it spoils the fine edge of the scissors.

Some petals require to be rolled upon a molding-ball, or pressed between the goffering-tools; others must be notched at the edges or fringed, these points being, of course, dependent upon the form of the natural flower.

The operation of crimping the paper is performed by placing the petal upon the brick cushion, and laying it in plaits by taking hold of a piece with tweezers and drawing them down, pinching the paper between them, so that crisp-looking creases, similar to those in the heart of a rose, are produced. Tweezers are better for this purpose than the fingers, although some people are dexterous enough to manufacture them in that way.

The calyx should be cut out in stiff glazed paper, or in

double tissue-paper coated over with mucilage and colored ; for the stamen and pistils, glazed cotton thread is used, which can be waxed, and the ends first dipped in mucilage, and then in the little boxes in which the powdered colors are kept.

Some workers prefer to make their stamens of horse-hair, or even strips of stiff paper rolled and gummed, or blades of coarse grass ; while it is also possible to copy the pistils by covering thread wire with green silk, and twisting a little pellet of wax or a bit of cotton at the end, which in its turn is glazed over with mucilage and dipped into color, and so made green, brown, yellow, or of any tint desired.

The little ball upon which the petals are mounted, and which serves as a basis for the heart of the flower, can also be made at home as follows : A little pulverized alum and some gum arabic are put into a bottle with a wide neck ; pulverized plaster of Paris mixed with cold water together with a little sugar of lead is added, and the whole mixed well together. This preparation must be kept closely corked up, and pieces cut off it as required.

The mucilage for glazing the pistils, etc., is best made of gum arabic and alum, with a very little flour stirred in water to a thin paste.

Furnished with these implements and ingredients, there is no limit to the pretty things the home worker can construct in tissue-paper. We will begin with flowers, and suggest as the easiest to learn upon the daisy or sunflower.

The full-blown meadow daisy must be cut out in a corolla, with twenty-three somewhat pointed petals, each one of these being divided from the next about a quarter of inch down the length. The center is best made either over a little plaster-of-Paris mold, or by covering a simple button with fine net and coating it with cement, and, as it dries, covering it with yellow mustard-seed or seed beads

set very closely together. When these are perfectly dry and firm, they can be painted over with gum, or dipped into the powdered yellow color. The daisy-stalk is made by twisting green tissue-paper very closely round fine wire, and fixing it at the back of the heart, after which the calyx is passed over it and gummed tightly in place.

To make the daisy-bud it is only necessary to cut out a smaller corolla and gum the petals lightly together; and, in order to give the pink tints natural to the tips, the bud should be lightly dipped in carmine powder.

Sunflowers are equally simple in construction, and the same plan must be followed with regard to them, and to all single flowers, the great object being to procure an exact copy of the corolla and petals, and the most natural color possible in the paper. Every conceivable tint can be obtained in the imported papers, besides striped and variegated sheets intended specially for certain flowers, such, for example, as the tulip, petunia, carnation, or variegated poppy.

It is more difficult to make a rose well in paper than in leather, for, in order to give it a natural appearance, the shades of color should graduate. More petals are required, and these should be cut somewhat larger, as most of them are molded one within the other. Petals of five different sizes are needed, as in Fig. 12—ten of the smaller size (3), five of the larger (4), two of (1), and three outer petals (5)

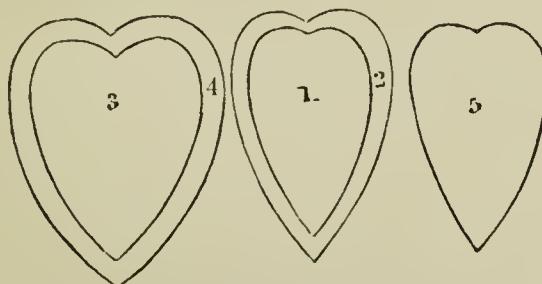


FIG. 12.—PETALS OF ROSE.

of deeper tint, also of the larger size, so that the upper part of the rose will have the deepest color. Each set of the petals should be molded together by being placed on the cushion, and drawing the ball-tool of the right size from the top to the bottom of each, thus hollowing them and giving them the crumpled appearance of natural rose-leaves. The edges of the larger ones should then be curled back with the nippers or curling-pin. A cluster of stamens, made as directed, forms the heart of the flower, and is gummed firmly on to the plaster-of-Paris ball, which serves as a foundation. The small petals are placed with the larger ones and gummed at the points, and then put on to the ball all together, while the larger outer ones are gummed on separately. Thread must be twisted tightly round each row of petals to compress them sufficiently to allow of their fitting into the seed-pod. The calyx of stiff glazed paper is, of course, first secured round the petals, and the stalk made on wire is then passed through seed-pod and calyx, and secured to the heart of the rose.

To mount a rose properly on a spray, leaves are of course required, and leaves are the most unsatisfactory part of paper-flower making. It is almost impossible to give them a natural appearance if formed of paper, and it is usual to provide either wax or linen leaves. If, however, the worker particularly desires to make them, they should be cut out of stiff glazed paper, moistened, and carefully pressed into leaf-molds, such as those used for leather or wax leaves; a wire can then be pasted down the back, and the whole washed over with liquid cement, and then again covered with paper and once more pressed into the mold. In this way a fair specimen of a leaf may be obtained, but it will not bear comparison with those made in wax, or manufactured in linen.

Roses may be made in all shades: a pretty effect is produced by mounting those of different color together. A

nice spray, for example, can be made by taking a good-sized length of wire and placing a cluster of the wax or paper leaves against it, then a pink bud and a full-blown rose. They should be tied closely with green thread, and the stems covered by twisting green paper tightly round them. About an inch of space should be left on the stalk, and then another bud and more leaves can be added. By bending the stems carefully they can be made to hang gracefully and naturally, and the leaves can be curled and bent by the fingers. A small paint-brush, dipped in a preparation of burnt umber and weak gum-water, passed over the stems and leaves, gives them a natural look. The spray is finished off by rolling green paper closely round the entire stalk, and brushing that over also with the solution.

In making white roses the paper should either be tinted in stripes of primrose-color for the points of the petals, or, if white paper is used, a little yellow chrome should be rubbed in at the edges; otherwise the dead white of the paper will appear very unnatural. For the same reason, in constructing yellow roses, either shaded paper must be used, or the petals must be rubbed over with deeper yellow chrome.

Variegated roses are made by mixing different shades of paper together, and are, of course, constructed in the same way as the others.

Poppies present no difficulties. Five petals are cut out of the proper shape, of scarlet, white, or variegated paper, and laid upon the brick cushion, each petal being crimped round the edge and then rolled and pressed with the head of a pin. A natural center can generally be procured, but, if not, it is readily imitated in paper by pressing the top in lines with the crimper, coloring it green, with brown dots on the top, and fastening it to the stem. Black duck-feathers make excellent stamens for the poppy; they should be tied together and arranged round the base of the center,

the petals being placed regularly round it beneath them. The stems and outer leaves of the bud will acquire the bristly look natural to them if they are first dipped in mucilage and then into green thread cut up into very small pieces.

In forming a pansy, striking results are obtained by making one of the petals of purple silk velvet. To form the heart, an oblong knob of plaster of Paris is colored with orange-scarlet, and the petals are arranged round this knob, one at a time, four of them being cut out of paper, and the fifth out of the silk velvet. The latter should be well gummed at the back and left to dry slowly, being pressed while damp with a crimp down the center. It will curl over naturally as it dries.

The calyx should be cut out of glazed paper, carefully turned back, while the stem of the flower must be gummed flat against the back of the plaster-of-Paris ball, in order that the petals may stand out as if from a background.

Full-blown chrysanthemums and carnations look very effective in paper. For the latter, the corolla is cut in three sizes, that for the foundation being the largest ; if intended to represent a variegated specimen, each petal is colored in shaded tints, mixed with gum-water. The largest corolla is first placed on the brick cushion, each petal is deeply veined, and the edges are notched and crimped. The smaller petals are then placed upon it, and, last of all, those of the third size, each being crimped and veined in the same way. In making the flower up, stiff wire is fastened on to one end of an oblong ball of cement, and two pieces of twisted feather are gummed upon it and turned back at the tips to represent the anthers of the natural flower. The circles with the smaller petals are then arranged round the ball and pressed closely together ; the remaining circles are added by slipping them over the stem and pressing them tightly round the heart, while the stem

immediately below the flower is covered with enough cotton wool to fill out the calyx, which should be cut out of bluish-green, stiff paper, and passed up to its place, being firmly pinched and gummed round the stem.

For the chrysanthemum tinted paper is most effective, or, if white is used, it should be colored with chrome in the center. The points of the petals are ribbed by drawing the nippers, slightly opened, sharply down each, taking several circles together on the cushion, and molding them all at one time. They are then separated and gummed together on the stalk, the smallest being slipped up first, and the largest laid flat behind them. Five of each size of the petals are required to make a full-blown chrysanthemum, and when completed it is very light and pretty.

Directions for successfully making paper flowers might be multiplied indefinitely, but enough has been said to start a worker fairly in this pleasant occupation, and we will mention only one more, the hyacinth, selecting it as being a favorite for decorative purposes, and as one that admits of great variety of color.

The necessary materials are: green glazed paper for the calyxes, tissue-paper for the blossoms, and hat-wire for the stems. Strips of the tissue-paper are cut in lengths, seven and one fifth inches long, some being one and a half inch and some two inches wide, and are then cut in fringes about three fourths of an inch along one side, and curled with scissors or knife. The strips are then loosely rolled together, and the calyx pressed at the bottom to give it the shape of the natural hyacinths. There are about twelve such blossoms on each flower, and they are secured in their places on the stem, which is made of covered wire eight inches long, by being securely tied with cotton thread, the smallest at the apex, and the others in gradations on each side. The addition of the green leaves is a great improvement, and, if

these are not bought ready made, they can be cut out in strips of glazed, dark-green paper, four fifths of an inch wide and from five to seven inches in length. Three or four are fixed round the bottom of the flower-stalk, and then the longer ones are added outside ; the effect is very natural, and such hyacinths arranged in pots are scarcely distinguishable from real flowers.

The possibilities of tissue-paper are far from being exhausted in the construction of flowers. Numbers of pretty things can be made of it, ranging from simple mats to whole suits of clothes.

Fancy balls have been given more than once in which the dresses of the guests have been limited to those which could be made out of colored paper, and the results have been astonishing. But fashion bazaars have familiarized every one with the artistic combinations possible in this material, and probably no more ambitious wardrobe than that of a doll would be attempted in ordinary homes. For this purpose it is admirably adapted, and the growing girls of the family might learn a good deal of the practical art of cutting out clothes and making up dresses by manufacturing garments for the cherished dolls, whose "things get shabby so very soon," in the opinion of their little owners.

A very pretty mat is now made of tissue-paper which is known as the Pond-Lily Mat, for which seventeen rounds



FIG. 18.—WATER-LILY MAT.

1, Section.

of paper are needed, cut as in Fig. 13. There should be seven different shades of color in the mat, two rounds of

each shade and three of white. Each circle should be folded in four and cut as in diagram (1); then with a little wooden roller each part must be firmly pressed upward, which will give it the necessary curl. The rounds are then laid one within the other and lightly gummed together. Another handsome mat is made by taking four sheets of silver paper and four of rose-color, cutting them into large rounds and folding them in four, cutting the outer edges in small shavings and curling them up over a knife, when they make a fully fringed border; others again by intersecting strips of folded paper and fringing them at the ends, or by imitating the confused construction of a bird's nest in colored paper, crimped and pinched up by the fingers over a fragile frame-work of wood. Parasols, bags, reticules, bonbonnières for Christmas-trees, mottoes, and articles too numerous to mention, suggest themselves to the industrious worker in tissue-paper, and a new use has lately been found for this material in the decoration of glass. Designs carefully cut out in glazed paper are pasted upon backgrounds of light-colored tissue, and laid upon perfectly clear glass. They are kept in place by rims of tin-foil, which serve as frames, and at some distance produce the effect of colored glass, and are admirably adapted for the lights over a staircase window or any other position where close scrutiny is impossible.

Lamp-shades of colored paper are always pretty, and can be made very elaborate by tracing an intricate pattern upon them and cutting it out with a pair of very sharp scissors. Such lamp-shades are beautifully made in Germany, where young ladies are celebrated for their dexterity with their fingers, and, by the use of graduated colors, very striking results are obtained. A simpler plan still is to fold the tissue-paper into five portions, refold each, and form a pattern of diamonds by cutting out diamond-shaped pieces, and afterward shaping out the portions and fitting

them to the lamp. A wreath of paper flowers round the shade is a decided improvement.

In conclusion, we would recommend such of our readers as live in far-away country homes to study the possibilities of tissue-paper with regard to the decoration of unsightly fire-places. Every one dislikes the inartistic combinations in the shape of fire aprons which are procured from stores ; but no one who has not tried it can realize how much is to be done by carefully cutting tissue-paper into very fine fringes, and curling it with a knife or scissors, and still more by dipping the fringe so cut into a weak solution of gum, and afterward into dry colors, and sprinkling emery dust over it while still moist. More elaborate fire-boards can be ornamented by flowers made by the directions we have given, and mixed with ferns and grasses ; and a pretty, well-arranged group of buds and blossoms will be a pleasant reward for the leisure hours spent in the occupation of making them.

IV.

MODELING IN WAX.—FLOWERS.

WAX is a more satisfactory article to work upon than either leather or tissue-paper; more beautiful results can be obtained by its use, and every minute detail of the thing molded or modeled in it can be reproduced. This is so thoroughly understood that great attention has been paid to the subject, and repeated experiments have resulted in the manufacture of what is known as "sheet-wax," which is specially adapted for the use of those who, taking up wax modeling as an occupation, are not inclined to undertake the tedious operation of preparing the wax itself.

Very successful portraits, both in relief and in figure, have been modeled in this material, and artists in wax have carried their art to great perfection; but few amateurs care to enter upon this branch of the work, and, therefore, leaving on one side attempts to copy "the human face divine," we shall restrict ourselves to a consideration of the best way to copy flowers and fruit, and to model fancy articles, such as crosses, baskets, etc.

The finest sheet-wax is that known as Madame Scheifle's, which is largely imported, and which is specially to be recommended as being less liable to crumble during the process of working than any other.

The price of the sheet varies according to quality and thickness. Very thin wax, which is known as "single," may be bought, of all colors, for about ten cents a dozen.

sheets ; "extra double," which is fit for making leaves, stalks, and pond-lilies, is higher in price, costing eighteen cents for twelve sheets ; and variegated wax, known as "mottled," costs about the same. In wax modeling, as in everything else, it is true economy to buy the best materials ; even if they cost more at first, they are less wasteful, and produce better results.

In addition to the wax itself, the following materials are required for successful wax modeling : Powdered colors, wire of different sizes, stamens of various kinds if the worker is not skillful enough to make them, sprig-moss, frosting, and arrowroot. Tools are made expressly for this work, and are of hard wood, with the exception of the pins, which are made of iron or steel fitted into bone handles.

Molding-tools are sold by the dozen, in assorted sizes, for a dollar a dozen, or singly for ten cents apiece for the smaller sizes, and eighteen cents for larger ones, with knobs at either end. The steel pins set in glass are only five or ten cents each ; and tweezers and folders cost fifteen cents.

Cutters of tin or brass are needed in making the smaller flowers ; small, sharp-pointed scissors, a good penknife, spatulas, palettes or saucers for mixing colors, camel's-hair pencils, brushes of different sizes known respectively as sable, veining, and Poonah brushes, and a small spirit-lamp, will all be needed.

Wire can be bought on spools, the white and green covered with cotton for ten cents, and covered with silk for fifteen cents per spool.

Molds for modeling fruit and leaves, berries and some varieties of flowers, cost from fifteen to twenty cents each ; patterns and extra gilt cutters vary in price from ten to twenty-five cents.

Powdered colors in small phials can be obtained in every shade and tint, the most expensive being carmine, which

costs forty cents, while all others are from fifteen to thirty cents.

The price of the camel's-hair brushes is from one dollar and twenty cents a dozen; Poonah brushes cost twenty cents a dozen extra, while veining brushes are to be had for five cents a piece.

Stamens and pistils can be bought, as we have said, all ready for use, but we can not recommend them. But, in case they should be preferred, it is well to be familiar with the cost, which is about sixty cents for a dozen packages. Palette-knives cost thirty cents; sprig-moss for roses and buds, sixty cents a dozen.

The sum total of these various necessaries may seem a little formidable, but the tools once bought will last for ever, and a dozen sheets of wax will go a long way in making flowers. All the materials for modeling in wax can be obtained at the stores where artists' materials are kept. One important consideration in working in wax is cleanliness, and great care is needed in molding it that it may not be stained or soiled. A large apron should be worn, and a wet sponge kept ready to hand, as the fingers are liable to become stained in using the colors. A sheet of clean paper should be laid upon the table or board where the work is carried on, and each piece of wax, as it is cut, should be carefully laid upon it by itself, and covered with paper until it is wanted.

If the stamens and pistils are of home manufacture, as they certainly should be, they can be made by taking sewing-cotton of the necessary color (or coarse grass will do), cutting it into lengths, and dipping each length into starch or glue. When perfectly dry, these must be dipped again in melted wax. The anthers are easily made by cutting tiny slips of wax, rolling them between the fingers, snipping off the ends, and pressing them upon the ends of the filaments. They should then be brushed over with mu-

cilage, and dusted with yellow powder to represent the pollen.

Pistils are a little longer, and the anthers for these are made of green wax, molded by the fingers and pressed on three sides by the molding-pin, then dusted over with the yellow powder.

We have supposed the worker in leather and paper to be familiar with the names of the various portions of flowers, but, lest we should have been mistaken, we now give an explanation of each term employed in our instructions.

A perfect flower, then, consists of *calyx*, *corolla*, *stamens*, and *pistils*.

The *calyx* is the extension of the stem, its divisions being known as *sepals*.

The *corolla* is what is called the flower, but is really the circle of leaves which forms the crown, and of which each of the divisions is called a *petal*.

Stamens are thread-like substances, generally found within the *corolla*, and consisting of two parts—a *filament* and an *anther*, the anther being the little knob at the end of the filament.

Pistils are the vessels in which seed is formed, and are found in the center of the flower; the slender part is called the *style*, and the *stigma* is the name given to the top.

A *leaf* has three parts—the *blade*, the *footstalk*, which connects it with the stem, and the *stipules*, or small leaves at the base.

The first process in wax modeling, as in leather and paper work, consists in taking an accurate copy of the flower or fruit which is to be modeled.

A white camellia would be a simple flower to begin with, as it is less fragile than some of the smaller ones. One suggestion in regard to this flower will be found valuable in all cases—viz., that as the object of the worker is to give effect as a whole, every little natural blemish should

be repeated. Allowance must be made, too, in cutting it out, for difference of material ; no wax can be quite as thin as the real petals of some flowers, and, as in nature every part fits closely to the next, while in the wax model a little margin must be allowed for fixing each petal in position, the pattern should be somewhat larger than the original, and every petal of a flower composed of a great number can hardly be copied ; many will be hidden from sight by the outer ones, but the position of the petals, whether they are just behind others, or between them, the correct number in each row, and every other detail, must be noted and, as far as possible, reproduced.

The petals to be copied should first be laid on paper, and, with a small Poonah brush lightly dipped in paint, touched round all the edges, thus leaving the size exactly on the paper, as in Fig. 14. This is the most accurate

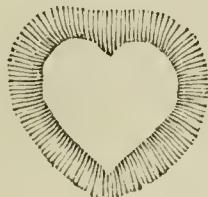


FIG. 14.

way of obtaining it, as every inequality in the outline is at once detected. In cutting the wax out from this paper pattern a small margin must be allowed for fixing the petal on to the stalk. The lines of the wax should always run upwards, and not across the petal, for which reason the upper part of each paper petal must be laid on the narrow part of the sheet and the wax cut round it with a sharp pair of scissors.

If the wax seems brittle, it is well to warm it a little with the hand before attempting to cut it, and the scissors may be moistened so that they shall not drag any of the wax and so produce an uneven edge.

In every case where it is possible, flowers should be modeled from life, for no pattern that can be given is so reliable as Nature herself; but as this can not always be done, the diagrams given in Fig. 15 may be acceptable as the most accurate pattern attainable for the camellia.

Fifty-four petals (Fig. 15, 1 to 12) in all will be re-

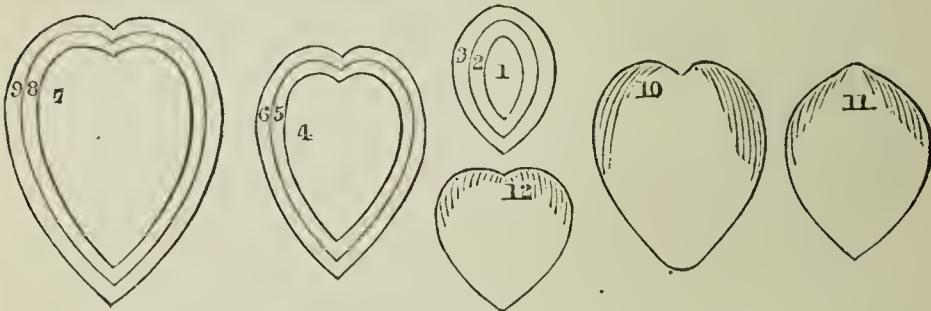


FIG. 15.

quired in white wax—five of those marked 8, five of 9, twenty of No. 7, three each of 5, 6, 4, 3, 2, and three, for the outer petals, of No. 10. Three of No. 11 are needed in lemon-colored wax, and three in green, of No. 12, for the calyx.

The wax must first be softened by being rubbed in the hand; white bloom-powder is then to be thoroughly rubbed on both sides of each petal, leaving only the part where it is to be attached to the stalk untouched, as the powder destroys its adhesiveness. The first six sets of petals should be lightly touched with the palest yellow powder, either with a brush or the tip of the finger, and shaded off at the upper part, the deeper color graduated to a mere tint at the edges, to imitate the shade cast by each petal on the one lying outside it in the natural flower. The three outer petals (No. 10) require a dash of green powder up the center of each, and a tinge of pink on the upper edges; and the petals of the calyx need a little brown marking to give the effect of the discoloration natural to them.

The smallest petals (Nos. 1, 2) must be molded with the smallest curling-pin, by passing the knob first round the edge of each to fine it off, and then rolling it round the center in the palm of the hand, hollowing it out till it is of the shape of a spoon, then creasing it by laying the pin all along the center of the petal. Nos. 5 and 6, and 7, 8, and 9, require less molding, and are turned back by a slight depression in the center, made by the thumb and finger. Each petal should have a crease down the center. The remaining petals all require to be slightly hollowed.

A thick piece of wire is now taken to form the stalk, which must be covered with a strip of white wax for about three quarters of an inch, and bent back, again to be covered with wax and molded in the hand to form a bud, like a rose-bud, which will serve as the center for the flower. The first three petals are placed upon this foundation, and adhere to it on slight pressure; the other small ones stand up round them, each petal a little behind and between the inner ones. As they may not adhere quite sufficiently, narrow strips of wax are molded by one of the wooden tools round the base of each row of petals. Care must be taken to place each succeeding row of petals sufficiently high to be seen a little above the last, with the exception of the three outer ones, which, of course, will not show in front of the flower. The sepals of the calyx are then put on in the same way, and kept in place by a narrow strip of green wax, the junction being hidden when the wire stalk in its turn is covered with strips of dark green wax carefully molded round it by a wooden tool. The stalk can be bent naturally, and two leaves, made as we shall direct, will accompany the flower.

There are various ways of making leaves, the simplest of which is the best. Two sheets of green wax, to match the upper and under surfaces of the leaf in color, should be held firmly in the hand, while between them a stalk of mid-

dle-sized wire is placed, covered with the narrowest possible strip of wax, which must be long enough to be attached to the entire stalk. The leaf to be copied is then laid upon the wax, which is cut to its exact size, the wire stalk being kept in the center. The real leaf is firmly pressed against the wax one, and together they are held near the fire until the perfect impression of the leaf is left upon the wax. They should then be dipped into cold water, when the real leaf can be easily removed after the wax copy has been notched round the edges and rolled perfectly smooth with the knob of the smallest curling-pin. The wire leaf-stalk is now to be covered with a narrow strip of wax and fastened to the flower-stalk in its proper position, the front or upper portion of the leaf being always placed against the side of this, and bent into the right shape afterward. Other strips of narrow green wax may be needed to hold leaves and stalk firmly in position, in which case they must be carefully and closely molded. A little liquid brown paint is then made by mixing some of the powder of that color in thin gum-water, and the stalk is lightly brushed over with it, thus giving it the natural appearance.

To complete the spray with the addition of a bud, three or six of the smaller petals must be cut out in lemon or pale green wax, according to size and color desired, and must be bloomed and tinted in the same way as the flower-petals, molded and fixed to a foundation bud of wax, being pressed closely round it so as to form a solid bud.

This bud in its turn is to be attached to the flower-stem in the same way as the leaves, and should be placed in position before they are added.

Colored camellias are made in the same way, the variegated ones having stripes of carmine and pink powder upon the white petals, rubbed in or laid on with a small sable brush, while red ones are colored throughout with madder, pink, and carmine, each being shaded off to the req-

uisite tone of color. Bloom is not needed for colored camellias.

Small flowers require great delicacy in manipulation. Jessamine (Fig. 16), which is very simple in construction, is for this reason more difficult for a beginner than the camellia ; and although it consists of but few portions, they are so fragile that the greatest care is needed in molding them.

The five petals of the jessamine are bloomed and tinted at once on both sides by mixing a very slight portion of the lightest yellow powder with the bloom on a palette-knife ; they are then molded with a curling-pin, and placed round the pistil (stamens are not visible in this flower). The back of the flower must be nicely smoothed and molded, and a strip of white wax rolled round the upper part to make a smooth tube, which is to be painted pink with a Poonah

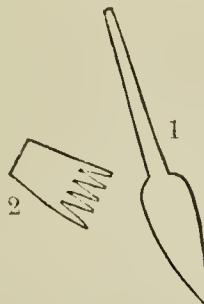


FIG. 16.—WHITE JESSAMINE.

1, Pistil ; 2, Calyx.

brush dipped in liquid paint. The calyx is cut out in one piece (Fig. 16, 2), and tinted at the top of the sepals with brown paint.

Five leaves are necessary on the stalk—a cluster of three, and then two, together. They are molded as described for camellia-leaves, but the edges of the leaves must be tinged with brown, or a slight tinge of carmine laid on over brown will have the same effect.

Pinks are easily made. The petals require blooming on both sides, and the center of each should be tinged with green. There are in all twenty-five petals, of sizes varying, as in Fig. 17, in each flower, and these are fitted round a stalk, from which two long white stamens (8) spring. These stamens should be formed of wax molded over a fine but

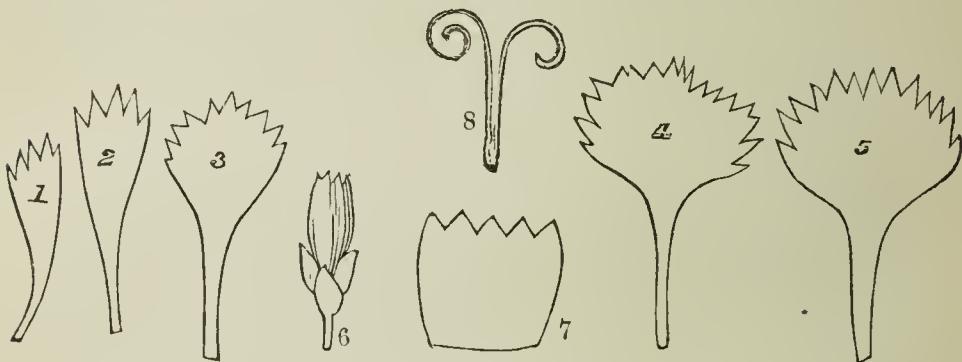


FIG. 17.—WHITE PINK.

1, 2, 3, 4, 5, Petals; 6, Scales; 7, Calyx; 8, Stamens.

stiff foundation. A strand from a feather answers admirably, and can be curled back at the tips with curling-pins. The petals are arranged one exactly behind the other in five rows, each row being securely molded to the stalk with strips of wax, some bent and twisted forward, some curling back. They are often irregular in nature, and all such irregularities should be carefully copied wherever possible. When the flower is finished it should be dusted over with frost. The green calyx is lined with white, or with a scarcely perceptible tone of green, and this lining is allowed to appear above the points. Four small scales (6) are put on at the bottom of the calyx and spotted with brown paint. Buds are made by closing smaller petals over a foundation bud, and the leaves should be of blue-green wax strips doubled and creased with the fingers. They do not need to be wired, but look better if frosted over.

Colored pinks, and many carnations, can be well made in

the same way, the difference consisting merely in omitting the bloom and tinting or painting the petals. The clove carnation is, however, one exception to this rule. It is very difficult to reproduce it accurately in wax, and, if this is attempted, the petals should be brushed over with crimson powder, painted with a mixture of carmine and ultramarine, and then dusted with carmine.

When two colors are needed, they should always be thoroughly incorporated upon the palette before using, and never painted on one after the other.

Roses can be very effectively copied in wax. Of them all, the easiest is the common pink or monthly rose (Fig. 18).

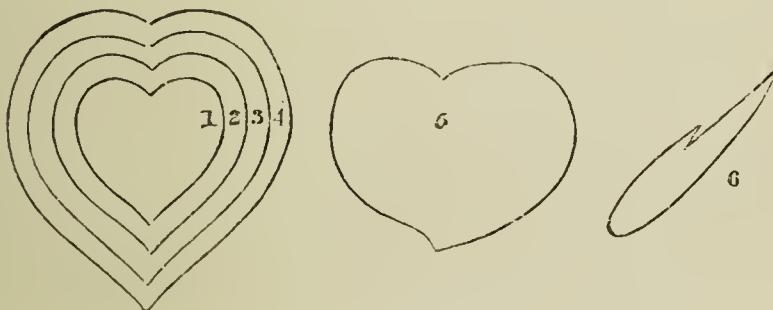


FIG. 18.—MONTHLY ROSE.

1, 2, 3, 4, Petals; 5, Calyx Sepal.

The sole difficulty in making these flowers is in the molding, as almost all rose-petals are more or less crumpled, and it is not easy to give them a natural appearance. To effect it, the petal should be laid on the palm of the hand or on one finger, and the edge smoothed out with the head of the curling-pin until it is perfectly flat; then the roller must be passed down the center, and the pin pressed down the line to form an indentation. The upper edge must next be curled over or under, as the case may require, which is best done while the wax is softened by the heat of the hand. The outer petals will often require more crumpling by the fingers; the edges in the natural flower may have little

pieces bitten out by insects, and such blemishes should all be carefully copied. A thick stalk of wire is prepared, as in the case of the camellia, with a wax knob, and the two smallest petals are wrapped entirely round it, the rest being also arranged round it, just touching each other at the upper edges, each row being firmly secured in its place by a narrow band of wax. Every succeeding row of petals is so arranged as to appear above the last, with the exception of the three outer ones, which need not show in front. The calyx has five sepals Fig. 18 (6), and these should be cut in two shades of green, snipped at the edges and well molded with the hand, and so passed up the stalk that the points may come over the three outer petals.

The seed-pod is made by rolling a double strip of green wax round and round the wire stalk, and molding it with a tool to the right shape. If little green buds accompany the rose, they are made by cutting out a calyx with five sepals and fixing them round a foundation bud of wax, which is mounted upon a stalk, and then closing them at the points ; if they are to present the appearance of a half-opened bud, three petals, colored pink, must be put in before the calyx is fixed, and a smaller seed-pod is made similar to that for the full-blown rose and molded in the same way.

The leaves are made as already described for camellia-leaves, great care being needed in copying the exact veining, notches at the edges, etc.

It would be impossible, in so small a book as this, to give detailed directions for any great variety of flowers. A little practice, and the experience gained by one or two mistakes, will be more valuable than pages of description. We will content ourselves, therefore, by mentioning two flowers which are much admired in wax, and which can be most successfully modeled from directions. Of these the fuhsia is one. The corolla and calyx must both be cut out of thick wax ; the calyx, indeed, should be of double wax. It

is the principal portion of the flower, and requires very careful molding. The sepals (see Fig. 19, 2, 3) must be bloomed entirely on the outer side and partially on the inner; the petals of the corolla (4, 5) must be rubbed with

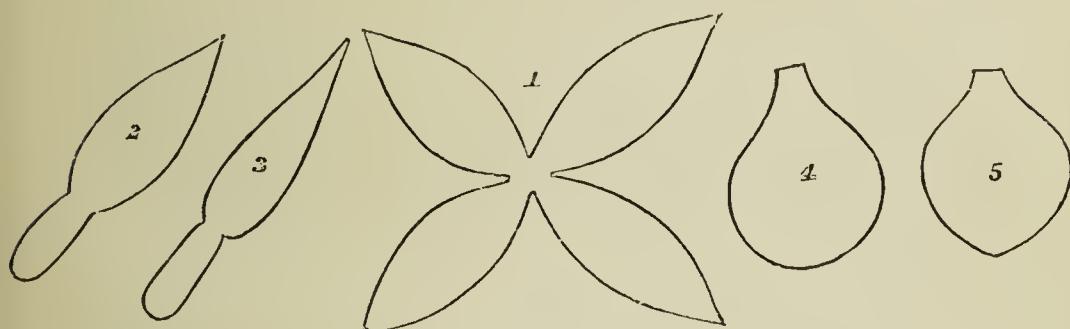


FIG. 19. - THE FUCHSIA.

1, Corolla; 2, 3, Sepals; 4, 5, Petals.

color and not bloomed, and the peculiar shade is acquired by a mixture of color—madder rose and carmine—or, if they are of very deep violet, they should be first tinged with carmine in the center, and then have purple powder rubbed into the edges. The petals require to be molded and hollowed; some are put on in pairs, others lap over one another. The tube of the fuchsia is made by rolling strips of white wax over the stalk and coloring it afterward; in this case the corolla is cut out all in one (1) and passed up over the stalk. The pistil is formed of very thin white or green wire, long enough to form the stalk of the flower, and covered with the narrowest possible strip of white wax, a little knob at the end forming the stigma. The stamens are composed of lengths of cotton, thick or thin, as may be needed, dipped in melted wax. Eight are needed for each blossom, four being shorter than the others; thickened points represent the anthers, which are dipped in gum and yellow powder, the stamens themselves being colored pink or red.

The seed-pod is made of a little ball of green wax pushed up to the calyx and modeled by the fingers. Large buds are formed of sepals (2, 3) fastened at the points over foundation buds; small ones, of foundation buds only, formed of white or green wax.

The second flower which we will particularize is the beautiful lily of the valley (Fig. 20), which is made either by cutting out a straight piece of white wax for the corolla (see No. 1), molding and joining it, and curling back each of the notches with a curling-pin, or by dipping the rounded ends of pencils of different sizes in melted white

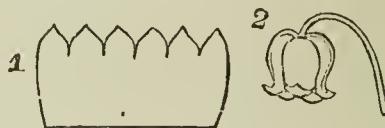


FIG. 20.—LILY OF THE VALLEY.

1, Corolla; 2, Perfect Flower.

wax after immersing them in cold water (2). The little bells congeal round the cold, wet pencil, and are easily removed when cold, and notched and curled into shape. The bells must vary in size, and tiny stalks are passed through each, headed by the pistil and six little stamens. The smallest flowers and buds are placed at the top of the flower-stalk, the larger ones at intervals on either side, and small leaflets are arranged at the base of each bell-stalk. There are usually thirteen flowers upon each stem, and the leaves that accompany the lily of the valley are deeply lined from the stalk to the tip with parallel lines.

Many of the loveliest heaths and bell-flowers can be copied in this way, and wooden molds can be bought for others, which are formed by dipping them into melted wax. The stephanotis is one of these, the star being cut out in one piece with five petals and joined on to a molded tube.

The possibilities of modeling flowers in wax can not be limited. Not only have we to consider the numberless garden flowers with which every one is familiar, but there are the countless beauties of the woods. Wild flowers, born, as it often seems, only to die in an hour, can be perpetuated in wax, and it is difficult to overestimate the knowledge of Flora that can be gained in this way. Any one with a love of botany could, by copying specimens accurately, acquire a most valuable collection, which might prove more satisfactory than any furnished by dried specimens. As a guide to the formation of wax-flowers, we subjoin diagram patterns for several of the most popular (Fig. 21), and suggest in addition that any flower, even the most intricate and difficult, can be copied by taking a natural specimen to pieces. Mignonette, the least easy of all flowers to describe, can be reproduced by this means so accurately as to deceive a keen observer.

In making up bouquets of wax-flowers, care should be taken not to mix together those that bloom at different seasons, and wild flowers and garden flowers look better arranged separately.

The pond-lily is generally grouped by itself. Regular stands are sold for it, with rounded shades, and are usually furnished with a foundation of a mirror-plate, in which the beautiful flower is reflected. The under portions of the blossom and the crimson lining of the leaves are thus displayed to advantage, and the pond-lily appears to be floating in its natural element. If the stems for these flowers and buds should be of the spiral kind, a sort of undulating movement is the result, which gives a still more natural appearance to the flower.

Wax is expressly made for the purpose of modeling pond-lilies; it is thicker than ordinary sheet-wax; but even this requires to be used in threefold thicknesses, and before cutting out the petals the wax is thus folded and rolled out

until it is perfectly smooth and even. When the petals have been accurately cut out, they are all rubbed over with

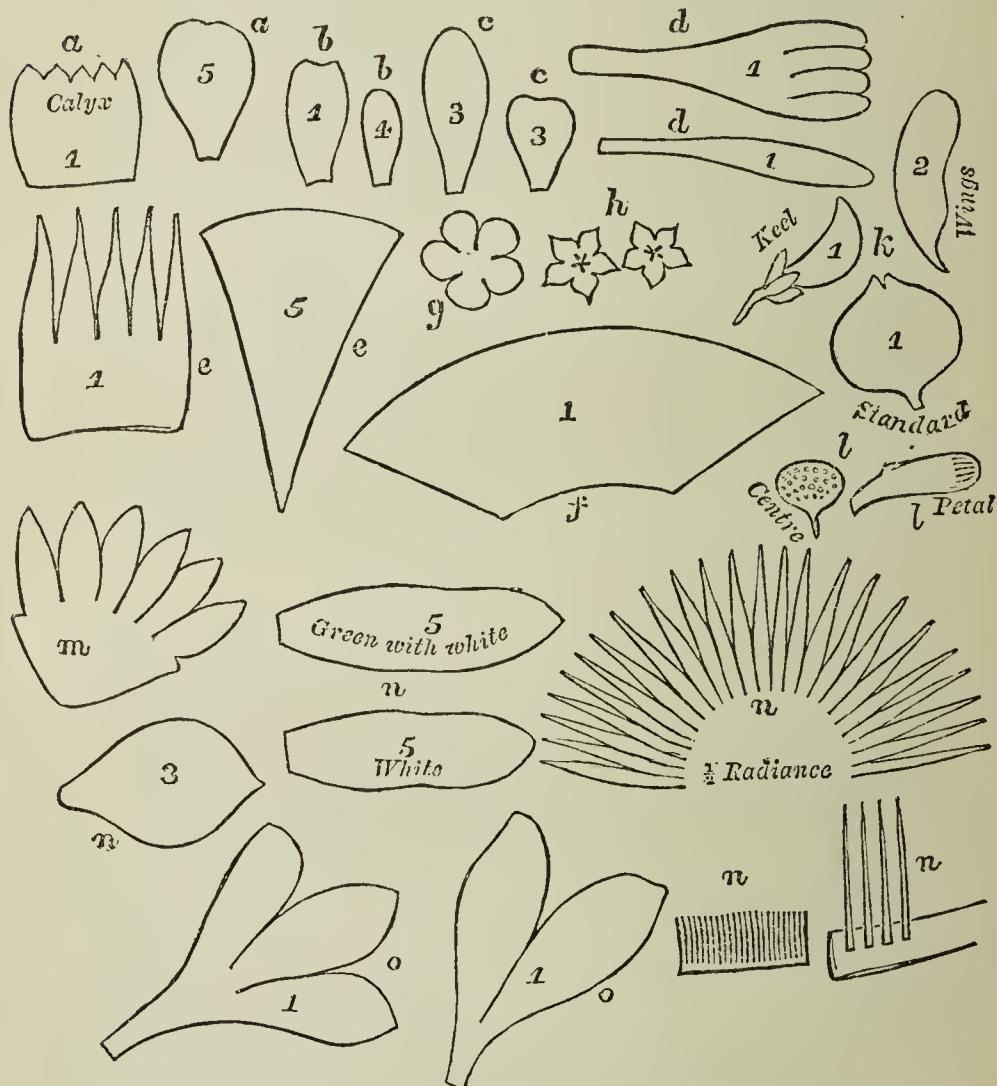


FIG. 21.

a, a, Primrose; *b, b*, Violet; *c, c*, Snowdrop; *d, d*, Honeysuckle; *e, e*, Convolvulus; *f*, Small Bindweed; *g*, Hawthorn; *h*, Forget-me-not; *k*, Laburnum; *l, l*, Daisy; *m*, Ilyacynth; *n, n, n, n, n*, Passion-Flower; *o, o*, Azalea.

white bloom, with the exception of four in the fourth row, which are stained straw-color. The large, flat heart of the

flower must be formed of yellow wax, indented with the curling-pin and molding-tools, and the stamens are to be cut out and molded in two sizes and colored in two shades of yellow chrome. The sides and edges of each stamen should be pinched together, and they are put on in rows round a foundation ball. The leaves and some of the petals of this flower are lined with different colors, the outer lining of the leaf being of dark green, and the inner of amber. To produce this effect in any flower, the best way is to cut out two impressions of the petal or leaf, and place a piece of muslin, exactly the same shape and size, between them, pressing the edges closely together.

As handsome stands and shades for the pond-lily are expensive, a suggestion may be given for making one at home which may answer the purpose equally well. A stand can be made about one foot square, of smooth wood, on the corners of which a groove is cut to receive the shade. The wood should be stained with a preparation of logwood, and afterward washed over with vinegar in which a rusty nail has been placed for several days, which will give it the appearance of ebony. It must then be rubbed with emery-powder and varnished, afterward polished with a wet woolen pad dipped in pumice-stone, and then varnished once more. Four square pieces of glass can easily be obtained, as well as a pane for the top, and these are fastened together with narrow strips of muslin dipped in size, each strip being pasted on the inner side of one pane and the outer side of the other. When the strips are perfectly dry they can be covered with some handsome embossed paper, or with dark binding, if preferred. The lilies should be a little raised when placed in position, and accompanied by several dark leaves and two or three buds. A little powdered alum sprinkled on the leaves while moist gives the appearance of water-drops.

MODELING IN WAX.—FRUIT, VEGETABLES, ETC.

MODELING fruit in wax is more difficult than copying flowers in this material, for the reason that special molds have to be made for each piece. Such molds may, of course, be purchased, and for small clustered fruits, such as grapes, currants, etc., they are sufficiently good ; but all larger fruit requires to have a plaster cast taken, into which the wax can be poured after being melted.

The materials necessary for fruit modeling are plaster of Paris for the molds, two vessels of water, hot and cold, a vessel with a spout (a cup or pitcher will do), a shallow tin saucepan and a towel, some old soft rags, wire of several sizes, camel's-hair pencils of different thicknesses, pieces of soft flannel and rag, a spool of crochet cotton, colors of the best quality, either in powder or tubes, of which the following selection will be found satisfactory : Prussian-blue, raw umber, burnt umber, lake, red lead, yellow chrome, blue and white powder for blooming, a bottle of varnish, turpentine, and the white "flock" for down, which is sold by paper manufacturers. A few directions as to the best methods of coloring may be found useful. The various shades of green are obtained by mixing chrome-yellow and Prussian-blue ; light greens by adding white, and afterward deepening the tone, as required, with green powder. Fruits like melons, filberts, etc., are first thoroughly painted green, and afterward marked in shades, as required. Strawberries

and bright red fruits are first painted all over in pink, and afterward highly colored. Most fruits require varnishing.

In arranging quantities of wax fruit it will be found a very great improvement to introduce the leaves and blossoms appropriate to each with them. How much more effective, for example, apples would look with leaves on a twig, or pendent fruits, such as grapes, currants, etc., accompanied by stalks and leaves, than they do heaped up together in one mass, to which it is very difficult to give a natural appearance.

The first step in modeling fruit is to make the molds; for this purpose, fine plaster of Paris in powder must be obtained, strips of thin tin, and some fine damp sand. We will suppose that an apple is selected for a first trial: the fruit is first placed in the sand, the stalk end downward, and one of the strips of tin is fixed an inch and a half from the sides of the fruit in ring shape, another half an inch above the fruit. Sufficient plaster of Paris is mixed with cold water to make a smooth batter, and this is poured carefully over the apple, covering it entirely. It is then set aside to cool, and, when perfectly cold, the rings are removed from the sand and the mold is lifted out, the fruit being very gently disengaged from it, after the edges have been trimmed to the exact half. Four holes are then made in the flat edge, which are to receive the projections of the second half, and this is made by replacing the fruit in the mold and tying a strip of tin tightly round the top of the mold, and then pouring plaster of Paris in the same way over the whole. All fruits which it would be difficult to remove from the mold, either on account of their hardness or want of consistency, should be well coated over with talc and oil before being replaced in the mold.

Smaller fruits are molded solid, a hole being made in perfect mold, and the wax, when melted, poured in at the stalk end and shaken about until it congeals, when the

mold is broken open and the fruit will be found of perfect shape. Strawberries, raspberries, mulberries, and similar fruits, are made in this way.

The plaster casts having been made as directed, the wax in which the fruit is to be copied is melted in a small tin saucepan. It must not be allowed to boil, but should be perfectly hot, and the ground-color of the fruit is mixed very smoothly with it by constant stirring. The mold is placed for some time in cold water, then carefully dried, and the melted wax slowly poured into it, first into one half and then into the other. The two halves are fitted closely together as the wax sets, and turned about in every direction, that the wax may be equally distributed. The molds are then replaced in cold water, but the turning about must continue until the wax is thoroughly congealed, which will be easily ascertained from the cessation of the sound made by it while liquid. When it is perfectly cold, the halves are carefully separated, and the fruit will be found perfect, needing perhaps a little trimming where the halves were joined together.

In making long fruits, such as bananas, it is well to have molds which open lengthways, it being easier to remove the fruit in that way. If there are irregularities in the fruit, more than two molds may be needed. The stalks are made like those of wax-flowers, and a clove pushed into the apple will serve for the dry calyx at the flower end. It is sometimes necessary to varnish glossy-looking fruits with mastie, but generally good rubbing will polish the wax sufficiently. Carmine and other deep colors are best rubbed on to the ground-color of the fruit, while streaks of color must be painted on with the brush, spirits of turpentine being mixed with it if the powdered colors are used, as wax will not take water-color. Tube-colors answer best.

To give the appearance of down or bloom upon fruit, a

little of the “flock” used by paper-stainers is blown over it. After the fruit has been moistened with turpentine, the ripe red of plums or peaches must be painted on, and when dry bloomed in this way.

Common powder-blue dusted over grapes gives them the necessary bloom, while ordinary hair-powder answers the purpose for white ones.

In making the small fruits which do not require casting, little glass balls can be bought which will sometimes answer the purpose of molds. These are dipped in melted wax which has been mixed with color, and drawn quickly out again by the stalks, which have first been fixed into the little hole in the glass ball left for the purpose. When drawn out they should be hung to cool heads downward, that the wax may settle thickest upon the lower end. If it should require paring or rounding at the stalk end, this is easily done when cold by cutting and rubbing smooth again. The stalks are then covered with green wax, and the cluster firmly put together by fixing the stems on to the stalk with narrow strips of wax, and they are then dusted with powder of the color required. White fruit is imitated in wax slightly tinged with yellow. Red currants are dipped in highly colored wax, or painted with carmine when cold. Black currants require painting. The seeds seen in transparent fruit like currants are imitated by marking the glass balls or molds with oval dots of chrome mixed with thick gum before they are dipped in the wax ; but they must be prepared a few days before they are wanted, that the dots may be thoroughly hard and dry.

It is better in coloring liquefied wax to put the powdered color in a thin muslin bag, and dip it into the wax, moving it about until sufficient color exudes from it.

Melons of all kinds can be very successfully copied in wax. Firm melons must be used for the purpose of casting, and they should not be too ripe ; the seeds should be

removed, and they can be dried and varnished for use when it is desired to represent only a slice of a melon, in which case these natural seeds, pressed into the surface, look better than any that can be made.

The molds of small musk-melons can be taken entire ; and, if they are carefully done, the wax will retain the impression of every line and mark.

It is a little more difficult to model slices of water-melon, as it is almost impossible to take a plaster impression on account of the moisture of the fruit ; but, by selecting a melon which is not quite ripe, it may be accomplished. A section cut lengthwise answers best. When the plaster is thoroughly mixed, the process is the same as with other fruit, as, although the ripe appearance of the melon will be wanting, it can be conveyed to the wax afterward by molding and making rough edges along the center, and pricking fissures through the surface for the seed receptacles. Then the natural seeds are inserted and kept in place by a little mucilage. The coloring of the rind should be of dark green, mottled with a lighter shade, the light green line showing upon the white of the rind, which is painted over in flake-white, mixed with pink, and deepened at the edge to that peculiar tint which constitutes the great beauty of the water-melon.

The sectional effect of small fruits like the raspberry or blackberry is produced by pressing tiny balls of wax upon a larger one of the right size and shape, and then dipping the whole in melted wax which has been colored, and afterward completing the coloring with a brush.

Vegetables are easily copied, the same methods being employed as in the case of fruit. Peas in the pod, radishes, tomatoes, and cucumbers, present no difficulties ; corn looks well, but requires great care in casting, as the grains are irregular. It is better to attempt it with a mold in three sections, as it is difficult to remove it from one in two halves.

Every one is familiar with the slices of cake in confectioners' stores which are modeled in wax ; so, too, the jelly molds and forms of ice-cream. But such objects would scarcely be copied by the amateur ; and, if they were, are easily accomplished by following the directions for fruit and vegetables. The only difficulty would be in producing the effect of icing, the method of which we will describe. Several coatings of thick white paint are laid upon the upper surface of the wax cake, and roughened at the edge with the molding-tools, while with a syringe liquid wax is taken up and ejected in drops, which are allowed to cool, and then others are ejected in the same manner upon them, so that a raised pattern or device is easily formed. When the figures thus made are cold, they must be coated over with white paint, and in the case of slices of cake a dark line is painted below the white edges in umber, shaded to yellow-brown.

In connection with wax-flower modeling there is one beautiful object which can be very successfully made in this material, and that is a cross. The cross covered with flowers or leaves is a favorite piece of wax-work, and very exquisite results are produced in what is known as the Autumn Cross, in which the decoration is of tinted leaves made in wax specially prepared for the purpose and known as "autumn-leaf wax."

A wooden cross of the desired form must be obtained (it should have a foundation of three steps), and this painted over with several coatings of white paint until a smooth surface is obtained. Heavy white wax is then laid all over it, first upon the steps and then upon the body and arms of the cross, being smoothed and spread with the spatula while a little warm. A second covering of wax is then placed over the first, and smoothed in the same way. Such a cross can be decorated with wreaths of ivy formed in wax ; while imitation autumn-leaves, modeled in the tinted material already

referred to, are beautiful. If additional colors are desired, powdered dyes can be procured, and they should be laid on with the tip of the finger and rubbed in with the stump of a camel's-hair brush.

Some people prefer what is known as the Granite Cross, which is also made of wood painted with "granite" color and dusted over with a mixture of "granite sand" and "diamond powder," both of which are to be obtained at the store for artists' materials; the leaves for decoration are then molded with green wire for stems, and turned around the cross, the larger leaves at the base, and the smaller ones and tendrils around the arms.

Such a piece of work is necessarily elaborate, and allows great scope for individual taste. Still more so does the Easter Cross, which should be gray in color, and profusely decorated with flowers, a number of them lying on the steps which form the base, and others clustering upon the cross and falling over the arms in every variety of form and color.

Suggestions and directions for such work could be multiplied indefinitely, but enough has been said to point the way, and to encourage the home worker in an occupation that has tangible and beautiful results.

VI.

THE PRESERVATION OF FLOWERS, GRASSES, AND SEA-WEEDS.

MANY persons who would not take the necessary trouble to model flowers in different materials, and who are disposed to disclaim all beauty in a “copied” flower, will occupy themselves in preserving and arranging natural ones.

Mrs. Hemans maintained that the only passion that could survive the influences of long-continued illness and trouble was the love of flowers; and certainly invalids, and those debarred from much activity, are uniformly successful in their management of them. Some people possess a natural gift for keeping them fresh, and have the knack of preserving them so that all their natural beauty is retained.

Within the last few years a great deal of attention has been paid to the preservation of natural flowers as a branch of industry. In Germany, notably in the little town of Erfurt, hundreds of girls are engaged in the business, and the flower market in Paris is largely supplied by them, the bouquets and other floral decorations being so thoroughly preserved that they are sent from one country to another without sustaining the slightest injury.

The processes employed by those who make a business of it can be readily followed by the many who would take it up as an occupation for leisure hours. A German authority supplies the most minute directions for the work, and we lay before our readers the process as recommended

by him, by means of which the most fragile flowers may be preserved and appear as natural as when freshly gathered.

A quantity of fine sand must first be procured (any gardener will supply it), and it will require thorough cleansing, in order to clear from it all soluble particles. This is readily accomplished by pouring water over it until, as it runs off, it is perfectly clear and free from floating particles.

This satisfactorily done, it must be dried, either by subjection to heat from the fire, or by being left in the sun, after which it can be thoroughly sifted by means of a sieve, until all the larger grains and any dust which may have escaped the cleansing process are eliminated.

When these directions have been carefully followed, the sand will be almost as pure as that known as "silver sand." It must now be kept in a dry place, and, when the flowers to be preserved have been selected, enough of it should be placed in a box to support the stems when they are placed upright in it. The flowers chosen should be in a full state of development, and not too moist with dew or rain. If they are, they must be dried, by placing two or three at a time into a glass with just sufficient water for the ends to stand in ; they will then dry and yet suck up enough moisture to keep them from fading ; but the delay necessary for this is almost as objectionable as the chance of their being too moist ; it is better generally to place them, directly they are gathered, in the sand. Each flower must stand up in the sand by itself, and, when all are in place, the delicate part of the operation commences. The box has to be filled up above the level of the flowers with sand, that they may be completely imbedded in it. This is done by sprinkling the sand through a tube, sieve, or funnel, in such a way that every leaf and petal rests upon sand before any one of them is covered by it. This is necessarily a slow process, but it repays the trouble involved. The box must

then be covered and carefully carried, without any shaking, to a place which is warm but not moist, the object being to allow the sand, which is porous, to absorb all the moisture from the flower. If the heat to which it is subjected is too great, the choice colors of the blossoms will fade, while, if not great enough, the moisture will not be absorbed with sufficient speed, and the flower will decay ; 100° F. is about the right temperature.

When the flowers are thoroughly dry, which will be in about three days, the sand must be allowed to run out of the box by piercing the paper at the bottom ; and, as it runs out, the lid must be lifted, and each flower, as it appears above the sand, taken up carefully by the stem and shaken very gently, to free it from the few remaining grains of sand which will be found clinging to it.

The action of drying renders the flowers very brittle, and only the greatest care will prevent their breaking ; but as exposure to the air imparts fresh moisture to them, they will be less fragile after a day or two. A first attempt at thus preserving flowers will probably not be entirely satisfactory ; one or two only out of a number will be found perfect ; but experience will soon teach which flowers are most readily preserved, and will lead to generally successful results. Flowers are said to have been preserved in this way centuries ago, and the art is still practiced among the Chinese, whose method of preparing skeleton leaves and flowers is superior to anything western nations have attempted.

In old museums in England there are specimens of skeleton leaves decorated with Chinese inscriptions and Oriental mottoes of all kinds, but it seems doubtful whether they were ever arranged in groups or bouquets as they now are. But, before considering the best methods of obtaining skeleton specimens, we will say a few words as to the art by which pure white flowers have been successfully preserved for an indefinite period. For a long time the

secret was a monopoly in the hands of a few experts, and wealthy persons paid exorbitant sums for the preservation of the white flowers which formed a bridal wreath, or which perhaps had lain on the breast of one beloved and lost. This result, it is now generally known, is attained by the use of paraffine oil, and the method, although a little troublesome, is quite within the reach of any one who desires to preserve such mementos.

Freshly gathered flowers, either pure white ones or those of the faintest tinge of color, are divested of all their green leaves and dipped, one at a time, in a pan of liquid paraffine oil. The oil is liquefied by standing the vessel which contains it in boiling water, and the flowers thus completely coated with it are entirely excluded from the action of the air, and are thus preserved for any length of time. The leaves to accompany them are differently treated, being either dipped in paraffine in which green powdered color has been mixed, or coated over with melted green wax of the kind used for modeling. Experiments of such a kind can be made with flowers of every kind, and it is a most interesting occupation, but one which, of course, will not satisfactorily preserve flowers of graduated tints or varied colors. The coating of liquefied petroleum is so transparent that it is quite invisible, but the subtle perfume of the flower is, unfortunately, entirely lost, whereas, if preserved by means of dry sand, the "scent of the roses will cling to them still."

There is yet another way which has been successfully tried by enthusiasts in this art, but it is one that hardly commends itself to amateurs, being by means of sulphur fumes. The flowers to be preserved are tied in loose bunches and hung heads downward over a box, in the bottom of which a pan with live coals of charcoal has been placed. Upon these coals sulphur must be sprinkled, and, as the fumes arise, the lid is closely shut and the whole

wrapped up in a woolen cloth for twenty-four hours. At the expiration of that time the flowers will be found perfectly bleached, but, upon exposure to the influences of the atmosphere, their natural colors will return in some measure, and will remain permanently, although they will never be as vivid as before.

There is no need to dwell upon the delight such an occupation as that of preserving flowers would prove to all who have botanical tastes, nor how surely it would induce them. The lover of flowers should never rest contentedly ignorant of their properties and qualities, and the first attempt at preserving them will open up an inexhaustible field of interest and pleasure. So, step by step, knowledge is acquired ; the first specimens are compared with others, new methods of preserving and specifying are learned, and thus, little by little, an herbarium of intrinsic value is formed.

We pass on now to a consideration of skeleton leaves and flowers, as valuable in their way as those preserved in the perfection of their colors. This, as we have said, is a very old art, dating back into the ages of antiquity, and constantly referred to in later publications. An English writer in the seventeenth century alludes to the process, and it was probably introduced into that country by the Italians, for great curiosity was aroused in Naples by the work of an anatomist who, in 1645, published the figure of a skeleton leaf. In 1727 a Dutch experimentalist, after repeated failures, succeeded in producing perfect skeletonized specimens of leaves and flowers, and he made the process, by which he obtained these satisfactory results, public. The leaves selected for such a purpose should be as free from blemish as possible ; this can be ascertained by holding them to the light, when any imperfection is readily detected ; they must first be carefully pressed under some heavy weight, each leaf being then brushed over with a solution of chloride of lime,

and placed in a tub of rain-water which is exposed to the air and sunshine. Putrefaction at once commences, and the most unpleasant part of the occupation is the necessity for examining the leaves, from time to time, after they have lain six weeks or two months in the water. Once or twice a week will be sufficient, when those which become soft and pulpy must be removed to be cleaned. This cleansing process is far from agreeable, as the leaves are filthy and slimy ; the best way to remove them entire is to slip a card under the one to be taken out, and so transfer it to a basin of fresh water, when it will float off the card without breaking. Two or three brushes and a knife are then needed for the cleaning—a soft brush, one of stiffer bristles, and a tooth-brush. With the soft brush the outer surface of pulp is carefully brushed away, the leaf being again lifted by a card and placed on a piece of smooth glass, and then by dexterous touches the entire pulpy surface of the leaf is removed, water being carefully poured over it to complete the cleansing. Some leaves require very little cleansing ; others, again, need gentle scrubbing with the harsh brush, while the point of the knife is required to cut away and trim the edges. As the leaves are cleaned they are passed into fresh water, and left there until others are ready for bleaching.

There is, however, a much quicker method than that described, which is almost as satisfactory, and which consists in destroying the epidermis of the leaf by the application of alkali. Four ounces of sal-soda are dissolved in a quart of boiling water, and to this two ounces of quicklime are added, and together they are boiled for twenty minutes. After cooling, the clear liquor is poured off, and the leaves are boiled briskly for an hour and a half in this. A leaf may then be dipped out on a card, and rubbed over with the fingers ; if the epidermis comes off easily, the leaves are ready ; if not, they require more boiling.

Whichever method is employed so far, the leaves are now ready for bleaching, and there are two or three ways of effecting this. The ordinary method is to take half a pound of strong chloride of lime and place it in a pitcher with three pints of soft water, which is stirred over it, the lumps being carefully mashed against the sides of the vessel. The pitcher is then covered and set in a cool place until the lime has settled to the bottom, which will be in about half an hour. Such particles as remain floating on the top must then be removed, and the clear liquid poured into a bottle and kept closely corked. The leaves are then passed carefully into a wide-mouthed bottle, and covered with a mixture of the solution and water. For ordinary leaves, two table-spoonfuls of the lime solution to a pint of water will be the right quantities, but for coarse seed-pods or stems, and some leaves, such as those of the magnolia, holly, or ivy, a stronger mixture is required.

A preparation of chloride of soda is preferred by some, as being more gentle in its action, but it is not strong enough for the coarser quality of leaves. This preparation is generally obtained of a druggist, as it can not be successfully prepared at home, and it so soon loses its strength on account of the volatile chlorine it contains that no definite directions can be given for the proportions in which to use it.

The leaves when bleached are placed in clear cold water and floated off on cards, to be dried upon soft cloths until all moisture is absorbed, when they can be carefully pressed between the leaves of a book, and in a day or two will be found to be ready for use, either to be arranged in a bouquet or mounted upon a background of velvet, which is certainly a most effective way of showing off the beauty of skeleton leaves.

There is a very great difference in the texture of leaves, some containing much more tannin than others, in which case it is extremely difficult to decompose them, and such

leaves should always be kept apart. The oak, chestnut, walnut, and birch leaves are especially difficult on this account, while those of the elm, maple, pear, silver poplar, and sycamore are very easily decomposed. Seed-pods require to be treated separately. Ferns need special care ; but as they are particularly beautiful, they are well worth the trouble they entail. Indeed, they are the most effective of all skeleton leaves. Their texture is so delicate that it is necessary to subject them separately to a process of drying. They should be gathered during the season of maturity, when the seeds are found at the back of the leaves. The best way to preserve them is to press them between the leaves of books, letting them remain there until they are required for bleaching. Those that are to be preserved can then be carefully selected and placed in a jar in such a way that they curl round, rather than with the stems turned downward, while smaller specimens can be placed in the space thus left in the center. The jar should then be filled up with warm water, and half a teacupful of the solution allowed to each pint of water. The jar must be tightly closed and set in a warm place ; twenty-four hours later the liquid is to be poured out and fresh solution and water supplied, which in its turn is removed after forty-eight hours' soaking. By this time the ferns will begin to whiten at the edges, and, after being left for another day and night in the third supply of liquor, will probably be completely bleached. Each should be removed as it is finished, and carefully laid in a broad basin of clean warm water to soak for a few hours. The water will require changing several times ; and it must be remembered that ferns will not bear handling like other leaves, but the rinsing effected by changing the water will be sufficient. As they are ready for drying, each spray must be laid separately upon paper, and this is best accomplished by passing the sheet of paper below the spray as it lies in the basin, and so lifting it out of the water.

The spray will cling to the paper and assume its natural appearance, when it can be carefully pulled out by means of a pin. The sheets of paper must be laid between soft towels, to rid them of as much moisture as possible before they are pressed between the leaves of a book, or folds of unsized paper. When all the sprays have been placed either in a book or between paper, each by itself, a heavy weight should be placed upon them to insure their drying smoothly, and they should not be exposed to the air until wanted for use.

When a sufficient number of various kinds of leaves has been prepared, the next thing is to arrange them into bouquets. For this purpose a glass shade and stand are provided, and a cushion of blue or black velvet should be made to fit the stand, into which the stems of the flowers and leaves can be inserted. Generally speaking, in the process of bleaching it will be found very difficult to preserve the stems of every leaf, and it is, therefore, often necessary to provide artificial ones. This is easily done by simply stiffening coarse crochet cotton with gum, cutting the right length for the stem, and carefully gumming it to the back of the leaf. These stems can be regulated in size for different leaves, and are readily bent into any shape or direction desired. The stems thus prepared, the arrangement of the bouquet proceeds by securing the leaves which are to form the center by gumming the stems into a hole made to receive them in the center of the cushion, using large leaves for a beginning, and bending the stems in such a way that they will lean over. Sometimes, if the shade is high, it is better to mount some of the leaves intended for the center upon silk bonnet-wire, and place the remaining ones round this grouping, according to taste. Beginners in this work should bear in mind that the heavier leaves, seed-pods, burrs, etc., should never be at the top of such a bouquet, as they detract from the light appearance which is the great charm of groups of skeleton flowers.

Another style of arranging a selection of leaves of this kind is to mount them upon a cross of black velvet, turning the smaller leaves—as those of ivy, etc.—around a cushion of black velvet, which forms the base. This arrangement shows off the leaves to great advantage, and such a cross is readily made by constructing one of simple boards of the size required, and covering it tightly with cotton-backed velvet.

The drying of autumn-leaves is a favorite occupation, and many are the devices resorted to in the hope of preserving the vivid tints of these most beautiful specimens of Nature's handiwork. How disappointing it is when all the care expended, all the pressing, varnishing, and ironing, only result in spotted, discolored, and shriveled leaves! There is, however, a method by which far more satisfactory results may be obtained, and, although it is a little troublesome, the appearance of the leaves when finished will amply repay the time and care bestowed upon them.

First of all, much will depend upon the condition of the leaves when gathered. Those which are collected early in the season—as soon, indeed, as the tints appear—are the best for the purpose. Some pure white sheet-wax is melted by placing it in a vessel which can stand in hot water; and when the wax is thoroughly liquefied a few drops of turpentine must be mixed with it. The leaves, when gathered, should be placed in a heavy book, each by itself, and pressed by laying a heavy weight upon the book for twenty-four hours, then removing them to another dry book, and repeating the process in all three times. By this time all moisture will have been extracted, and each leaf can be gently dipped into the liquid wax, and held there until it cools; then removed, and placed on paper to harden. To ascertain that the wax is of the right temperature, it is best to dip a leaf in and draw it over the edge of the vessel on each side. If the wax is of the proper heat, the leaf will look as if just varnished, while, if too hot, it will shrivel, and if too cool,

lumps will form on the surface of the leaf. Leaves treated in this way will appear perfectly natural ; but if it is wished to give them a more shining appearance, they can be brushed over with dammar varnish.

It is needless to enter upon suggestions for the appropriate use of autumn-leaves ; they are universally known, and whether they serve as ornaments alone, or are used in combination with berries and burrs, they are always graceful, appropriate, and beautiful.

Drying grasses collected during the summer holidays is another occupation that fully repays the time bestowed upon it. Grasses are dried by pressing them in the same way as leaves ; but, as in the arrangement of winter bouquets, it is often desirable to have them of other than the natural color. They are, for this purpose, first subjected to a process of bleaching, and then colored by dipping them into spirituous solutions of aniline dyes, which are procurable at any drug-store, and can be made deeper or lighter in tone by adding alcohol. When removed from the dye, they are simply shaken out, and exposed to the air.

Grasses are bleached by immersing them in the same solution of chlorine that was suggested for flowers, and they should dry in an upright position, as they bend in the process, and so gain the graceful natural appearance.

Fewer persons, comparatively, interest themselves in the preservation of sea-weeds, and yet the most exquisite results can be obtained by doing so.

No sea-side occupation offers so many charms as a collection of sea-weeds ; and those who have spent time in securing beautiful specimens will not grudge a little trouble in preserving their beauty. No land-flowers exceed in beauty some of those growing far in the green depths of the sea, thrown upon the shore by the action of tumultuous waves, and picked up, perhaps, hundreds of miles from their place of growth, to be separated by careful hands

from the coarser specimens of ordinary sea-weeds which accumulate in such quantities upon the beach.

The sultry days of summer, in the holiday season of July, August, and September, afford the best opportunities for collecting the rarer specimens, such as the beautiful varieties of the colored algae which are classified as olive-green and red ; among the latter are those beautiful fern-like and delicate branches of rose-colored weed which, when floating in the water, look like outlined leaves, composed entirely of delicate veins, and which, when spread out upon card, retain all their delicacy and beauty. When the tide is out it is possible to wander far over the sands, to search among the rocks and crannies exposed to view, and to disentangle from the masses left behind by a stormy sea the exquisite fronds and sprays that will amply repay preservation. In collecting them, it is well to set out on a sea-shore ramble armed with a little pail of sea-water, into which each specimen can be thrown as it is found ; for if sea-weeds are carried any distance without water they die at once. When home is reached again, each separate spray should be carefully rinsed by passing it through and through fresh water, so that all particles of sand and dirt are washed away. Then it should be placed in a shallow basin, and floated out upon a card, each tiny fiber and shred being carefully saved. A piece of drawing-paper, or, better, Bristol-board, can be cut of the desired shape, and the sea-weed again floated into fresh water, to float off once more upon the board, while, as it leaves the water, a sharp-pointed instrument (knife or scissors) lays each strand in its own position. Where there are too many branches, they should be cut off, and the rest carefully arranged on the card. Then, by holding it in a slanting position, the sea-weed can be brought up out of the basin, the water poured gradually off it, and, after allowing the card to dry partially, soft cloths laid upon it will absorb the remaining moisture, and it can

then be placed in a book and subjected to moderate pressure.

If the specimens are large or thick, it will be necessary to remove them in a few days, and constantly change the book or paper in which they are drying.

Some sea-weeds are of a glutinous nature, and very sticky. These require different treatment, and must be dried by exposure to the air, and then laid upon cards over water and wiped with a soft cloth ; afterward they can be placed in a book, to be pressed until dry. Great interest will be added to the preservation of sea-weeds if they are classified and arranged in order ; and to those of our readers who desire information upon this point we would advise the perusal of a most interesting work upon Sea Mosses, by A. B. Hervey, published in Boston.

Sometimes the weeds will not adhere to the cards without mucilage of some kind ; it is best then to paint the surface of the card over with dammar varnish, adding a little gum arabic.

The arrangement of sea-weeds, like that of flowers and leaves, must be left to individual taste ; but we may suggest that little baskets filled with them are very pretty, and that the task of arranging them upon cards or in scrap-books will offer an occupation for rainy days, or hours perchance spent indoors, which would otherwise pass drearily enough.

VII.

SPATTER-WORK.

A CONSIDERATION of all that can be done with flowers, leaves, and grasses reminds us of a very pleasant method of perpetuating them in fancy work. Spatter- or splash-work was at one time in everybody's hands ; and, although ambitious workers nowadays talk more of decorative needle-work and painting on china, it is an open question whether these occupations afford, on the whole, such satisfactory copies after nature as the humble attempts of those who are content to occupy their leisure hours with spatter-work. Moreover, from a decorative stand-point, this occupation has very much to recommend it, for spatter-work can be used for countless purposes, is quite inexpensive, and can be carried out upon material of almost any kind and of any color, provided the surface is smooth and even.

Spatter-work looks equally well on ebony or upon thin, transparent muslin, in the one case the operation being performed in light colors or dyes, in the latter in Indian ink.

The materials for this work are inks or dyes, a small brush and comb, sold for the purpose, the leaves or sprays to be reproduced, and the material on which the ornamentation is to be made. To begin with the simplest : A doily is perhaps selected, and a piece of white jean is taken for the purpose, cut out to the desired size, and then the fern-leaf, heather, or spray, to be marked upon

it, is pressed carefully in the desired position. A quantity of good Indian ink is placed in a saucer, into which the fine brush is dipped, and it is then passed over the comb, thus splashing the ink all over the surface of the doily until it is quite black. It must be left to dry thoroughly, and then, the leaf or spray being carefully removed, its exact impress will be found in white upon a dark ground; a fine brush is now required to make the natural veins, etc., upon it, and the work is ready.

Simple as this is in description, it is capable of very great expansion in fact. The pattern thus transferred gives, of course, only the bold outline of the leaves, and the beauty of the effect will depend upon the accuracy with which the veinings and markings of the leaves are given.

In spattering the ink, too, a great deal of care is necessary, and the operator must always begin at the center and proceed to the edges, the center being invariably for all designs of the deepest color.

Almost any kind of leaf can be copied in this work, excepting very large and thick ones. To prepare them it is only necessary to press them thoroughly, either in blotting-paper or between the leaves of books. They should be moved more than once and placed between other dry papers constantly, until all their moisture is quite absorbed, when they are fit for use. Ferns are the leaves generally used, and the easiest to transfer in this way, for which reason this work is often known as fern-work.

Transparencies are beautiful in this style of decoration. For a lamp-shade, for example, a light green material might be selected, and the foliage outlined upon it in light colors spattered in the way described, the leaves being always veined with the color used for the background.

In spattering, it is well to protect the dress from the splashing of the paint by wearing an apron made to cover

the waist and sleeves—a precaution which may be observed in other fancy work with equal propriety.

Spatter-work can be very effectively done upon common card-board, and there is no limit to the purposes to which it can be put. The effect of shading will, of course, only be gained after some practice; but, when once thoroughly understood, it can be carried out so artistically that a spatter-work panel will be as handsome and effective as one painted in water-colors. Boxes in white wood can be readily ornamented by this means, and, when the ink or paint is dry, a polish is easily given by brushing it over with a coating of gum shellac dissolved in alcohol.

Violet, green, purple, or red inks can be substituted for black, while for purposes where washing is required indelible inks are used. Monograms and initials are easily transferred in this way, and intricate designs of ferns and other leaves can be arranged in such a manner that, by care in the shading, most artistic effects are produced. In making a card-board lamp-shade, for example, the pattern can be cut of any shape desired, either in crescent form or in six pieces of the same size and shape. Any color can be selected for the ground, and each of the six pieces can bear a different design; each should be scalloped carefully at the top and bottom, and, small holes being made at the edge of each side, the six portions are joined by being laced together with a fine silk cord of the same color as the card-board. A set of mats for the dinner-table, to place under the dishes, can be very prettily made in this way by arranging well-pressed fern-leaves and ivy-leaves in a semicircle, and above them a monogram cut in card-board; then spattering either black or violet ink thoroughly over them, and afterward delicately tracing all the veinings of the leaves and markings of the monogram. A practiced hand can spatter so carefully that the effect of shade will be given to

the background, and this, of course, immensely assists the artistic effect.

Brackets and mantel lambrequins are extremely pretty in this style of work. Mantel lambrequins especially, with the leaves so arranged that there is a deep depression in the center, the edge being cut out in graduated scallops—the largest being, of course, intended for the middle one—are very handsome. If the spattering is of white or cream-colored paint on a dark-blue ground, and all the veinings are carefully marked out after the leaves have been removed, such a piece of work is well worth the time it takes.

It must, of course, be carried out upon smooth material, such as satin or satinet; plush, velvet, and even silk, are of no use, the surface of such material being too uneven.

For those who can spatter well upon wood there are many ways of passing time pleasantly. For instance, a paper-cutter of white wood can be changed from a mere ordinary article to one of real beauty by a little skill and care. The leaves selected to form the ornamentation must, of course, be small. Very tiny fern-leaves would serve the purpose best, or ivy-leaves gathered when quite young. They must be pressed so tightly on to the wood of the knife that they will adhere, and must be left after the spattering is done until it is perfectly dry. It is always necessary, in arranging leaves for such work, to avoid overcrowding them; each must lie by itself, perfect in outline, and any deviation from this rule will spoil the best design that was ever arranged.

Leaves that have been long dried and have lost color are always useful for spatter-work; and in this way the memory of pleasant hours spent in collecting them can be indefinitely prolonged. It would be possible to make a very handsome folding-screen by the introduction of spatter-work panels. The material selected must first be stretched very tightly over each panel, and the flowers or leaves gracefully

arranged and firmly secured by pins, each panel having a different combination. On blue satin in white, or upon white satin in blue, red, or black ink, such an idea, well carried out, would be very successful. As the same leaves may serve for several such designs, it is best to secure them in place by tacking the stems down, rather than by putting pins through the leaves themselves.

This work is especially suited for the decoration of portfolios intended for the reception of dried leaves and flowers. The covers of such portfolios can be made of Bristol-board, the design spattered on in black ink, and, when thoroughly dry, the edges can be bound in colored ribbons, and the same material will furnish strings to tie them together. White blotting-paper can be cut to the right size for the leaves, and, when completed, the portfolio will serve both the useful purpose of drying leaves well and the ornamental purpose of looking well on the parlor-table.

Such simple applications of the art of spatter-work as we have suggested will recall others of the same kind, as, for example, a *négligé* pocket for the bed-head to hold a watch, pocket-handkerchief, etc. Such a one could be made at very small expense, having gray or blue linen as a foundation. Each little pocket could be ornamented with a different design, and fastened in place by button-hole stitch in silk, of the color of the paint or ink used for the sprinkling. Boxes for the toilet-table, toilet-cushions, toilet-mat, and, as we have said, short window-curtains, would all repay the time spent upon spattering them; and we strongly recommend young ladies who are at a loss for occupation to bestow some attention first upon collecting suitable leaves for decorative purposes, and then upon perpetuating them by this simple method of spatter-work.

VIII.

FRAME-MAKING.

THERE are no more popular occupations for leisure hours than wood-carving and amateur carpentering. In many homes there has grown up of late years quite a passion for carving in wood, especially since the introduction of the fret-saw for this class of work. Ladies with a taste for art can accomplish much with a gouge or chisel, and produce effects in relief which are well worthy of admiration. Foremost among the uses to which a knowledge of this art can be put is that of frame-making.

Handsome frames of any kind are expensive, and many pictures valued for their intrinsic merit, or for precious associations, lie hidden away in portfolios, awaiting the time when circumstances shall justify the necessary outlay for a frame. In such cases, home-made frames have much to recommend them in addition to the fact that they are inexpensive. They can, by the exercise of a little taste, be made so suitable to the picture for which they are intended that, whether they are in carved work or in plain wood, polished or gilded, whether they are severe in design and style, or made of odd combinations, such as cones, popcorn, straw, coral, shells, or the many other things pressed into the service, they can be entirely redeemed from mediocrity by originality of workmanship and suitability to the subject of the picture.

Materials for such occupation must include, in addition

to a few carpenters' tools, that most important article of furniture, a common table, which may answer the purpose of a carpenter's bench, and must be well built and strong. It will be a great assistance if the table is furnished with a rest and screw, such as carpenters use, and it should be made of such common wood that no regard need be paid to the knots and haicks it will receive before much work is accomplished upon it.

A box to hold the tools is a desirable addition, and in it should be found a plane, a few rasps and a file, a mallet, and, for carving, a few gouges and chisels of different sizes. These are amply sufficient for amateur carpenters, and if fret-work carving is to be undertaken, the best way is to buy a fret-saw machine, which can be obtained, with all necessary accompaniments, for the moderate sum of one dollar and a half. Easy designs for the guidance of amateurs are generally to be bought with it.

The first thing to consider when a frame is to be made is the expense that may be involved in it. We suggest this because where a little money can be spent it is always possible to buy strips of every variety of prepared moldings in any lengths, and for almost any price. At the same store—a picture-frame maker's—gilt moldings for gold frames can be purchased, as well as ornamental moldings in the shape of stars, roses, and other devices, all ready to be glued on to the home-made frame; and we should advise all amateurs who can do so to obtain them, or, failing this, to content themselves with plain wooden frames, trusting for decorative effect to simple carved devices or ornamental wreaths of leather-work, the making of which has already been described.

It is not our intention to give directions for such elaborate work as should make the occupation in reality amount to task-work, but to suggest various possibilities in the shape of frames, which may be undertaken by the least

skillful amateurs, and to give a few plain directions for gilding or painting which may be acceptable to beginners in the art of finishing off.

The very easiest frame an amateur could attempt would be one in simple square form, the ends projecting. For this it would only be necessary to select four lengths of slender pine wood—two long ones for the sides, and two shorter ones for the ends. Laying them in the required shape, the ends resting on the sides, they can be nailed firmly together about an inch and a half from the edges. The edges can then either be left perfectly straight or cut into pointed shape. The foundation once made, the frame can be stained either with a decoction of Venetian-red and vinegar to imitate rose-wood, or with burnt umber to give it the dark appearance of walnut. It is then varnished, and ready for any decoration that may be desired.

If the worker has sufficient knowledge of wood-carving, a simple wreath of ivy-leaves can be cut out of one-eighth-inch wood, the veins and markings all being stabbed out with the gouge or chisel ; or, if leather-work is decided upon for the decoration, a very pretty trellis-work effect would be given if a vine-leaf wreath were molded with clusters of berries and small fruit gracefully arranged to trail against the wooden foundation. Of course, the decoration, of whatever kind it may be, must be stained to match the framework. If the ornamental wreath seems too elaborate for a first attempt, the frame would not look amiss if it had simple ornaments placed over the joined corners.

A square frame to fit exactly at the corners is, of course, more difficult. For those who are ambitious enough to wish to accomplish this in the exact method of the genuine frame-maker, a miter-block would be necessary, together with a miter-shoot and a vise, which are made of wood, and can be obtained at any-tool shop, as can also a trying-plane, which, although heavy, can be easily moved even by a weak

hand, as it always rests upon the miter-shoot. There is a machine known as the "miter-machine," which trims the wood much more quickly, but this costs from fifteen to twenty dollars, and is by no means necessary.

When the worker has a miter-block and shoot, the lengths of wood decided upon as the right size are first sawn off and transferred to the miter-shoot, to be cut off at exactly the same angle. Two pieces, intended, respectively, for end and side of the frame, are then fitted together, so that the angles exactly match, and the longer of the two is first secured in the vise and thus held steadily in position, while the shorter one is placed against it, projecting the least possible degree beyond the first, to allow of brads being hammered in. The necessary holes are made by an awl in the thickest part of the wood, and the brads are then carefully hammered in. The brads should be two-and-a-half-inch ones if the frame is two inches in depth.

Supposing, however, that the frame-maker has only the ordinary tools of a small carpenter's box, the frame can be almost as accurately made by carefully planing away the ends of each separate piece to the exact angle required to fit it to the rest ; then joining them by means of headless nails driven through the thickest portions. There will be crevices in the home-made frame, probably, which will require stopping or filling up. This is accomplished by making a composition of whiting and size, which will effectually fill up holes left by the brad-awl, etc. The whole surface of the frame must then be carefully rubbed over with emery-paper of fine quality, and the staining or gilding will be the next operation. For merely staining the frame, directions have already been given (see page 19) ; for gilding there are three distinct methods, for each of which we will give directions, merely remarking that, in our estimation, the most practical is that of simply washing the frame over with liquid gilt, the powder for which can be bought at the artists'-ma-

terial stores and mixed at home with size, and which is very inexpensive; sufficient can be obtained for thirty-five cents to gild a good-sized frame. Williams's liquid gilt, all ready for use, is rather more expensive, costing one dollar a bottle.

The other methods are by the use of mat or water gilding, or oil gold size; if the former is selected, the frame can not be burnished—it will have the appearance of dead gold—while if oil gold size is used it can be burnished, and, if not burnished, can be readily cleansed when wished, by simply washing it over with water.

For the more elaborate processes of gilding, these various materials will be required, all of which are to be bought at the artists'-material stores: For oil-gilding—pipe-elay size and chrome-yellow mixed; gold-leaf books of different qualities, costing from twenty-five cents upwards; tips or flat squirrel's-hair brushes, spirit varnish, what are known as skewing brushes, mat gold size, emery-paper, ormolu in solution, burnish size, oil sizes, agate burnishers, a knife for taking up the gold-leaf, and thick camel's-hair brushes.

Gold books contain about twenty-five leaves, and can be obtained of different tones of color. A cushion to cut the gold-leaf upon can be easily made; it consists simply of a square of wood covered with chamois-leather, and it is advisable to have a little screen nailed on, of either stiff paper or parchment, to prevent the gold-leaf being blown away. The size known as mat gold size is made of ground yellow ochre, copal varnish, linseed-oil, and turpentine, mixed together with boiled oil. To amalgamate it properly the powdered ochre must be first mixed gradually with oil, and the other ingredients added. If oil-gilding is decided upon, after the frame has been thoroughly rubbed with emery-paper, it must be first washed over with the pipe-elay size and chrome-yellow mixture, which is made by mixing chrome-powder with boiling water to a smooth thin paste.

When it has dried thoroughly into the wood it will require to be washed over again with size and polished with emery-powder. A coating of oil gold size is then put on and left to dry for about twelve hours, when it is ready for the application of the gold-leaf.

The real difficulty of the operation now commences in the laying-on of the gold-leaf. The leaf or leaves—for several will probably be needed—are lifted out of the book by tip or brush, and laid on the cushion, to be cut into strips. One of the camel's-hair brushes is then dipped into a saucer of clean water and brushed over the surface of the frame, wetting rather a larger portion than the strip of gold-leaf will cover. This strip is now placed on the wet piece of the frame as straightly as possible and closely pressed down by the brush. Layers of the gold-leaf are thus successively placed one beyond the other, the frame being freshly moistened for each, and, when thoroughly covered, it is set aside to dry. If the frame is a perfectly plain one, this operation presents few difficulties ; but if there are moldings, or carvings, it is necessary that every crack and crevice should be covered. For this purpose what is called a skewer brush is taken, applied lightly to the surface, and worked round and round so that the gold-leaf is thoroughly spread over and worked in. This accomplished, about six drops of "ormolu" are mixed in a tea-cupful of size and brushed all over the work.

The burnishing consists in giving the frame two or three coatings of burnish size, and, when dry, rubbing it thoroughly with burnishers of different shapes—a long operation, but one which completes the work with the exception of the application either of yellow gold lacquer or white, hard spirit varnish.

It will be seen that gilding in this manner is by no means the simple operation one might imagine, and our readers will probably agree with us in our preference for

the gilt paint to be bought ready made and simply applied with a brush.

The making of an oval frame necessarily presents more difficulties than that of a square one, and the possibility of buying them all ready for painting, varnishing, or decorating, is a great temptation ; but should it be wished to have one entirely of home manufaeture, there are two ways of proceeding. The frame can be either in solid wood or of lattice-work, the latter being by far the easier method of the two, and consisting simply of larger and smaller semi-circular pieces of wood joined to form the oval, the smaller one for the inner, the larger for the outer edge, while thin, narrow strips of wood are placed across from one edge to the other in the form of lattice-work. The foundation thus made can be colored and varnished, and then decorated with leather leaves, or leaves carved in very thin wood. For the solid frame it is necessary to draw the exact outlines of outer and inner oval upon the wood to be used, and then to cut it or saw it away to the required shape, planing away all irregularities. Such a frame, if of sufficiently thick wood, can be carved simply or more elaborately in relief, and we take this opportunity of explaining how very easy such simple wood-carving is. The wood will have been already prepared by planing, thus presenting a perfectly even surface, and upon this surface the outline of the leaf to be carved must first be carefully traced. With a small, sharp chisel, which has been ground of slanting shape, the surface of the wood surrounding the edge of the leaf is stabbed all round the outline to the depth of about the sixteenth of an inch. The process of carving in relief consists in getting rid of just this sixteenth of an inch of wood all round the leaf, and the whole skill of the operation lies in so cutting it away, by aid of chisel and gouge, that the leaf will stand out perfectly in raised outline. The gouges, which are only curved chisels, can be bought for ten or twelve cents

each, of different sizes ; and great care must be taken not to cut too deeply into the wood, especially as, in the case of the frame which we are considering, other leaves and tendrils will continue the pattern, and all must be on one level. The outline once successfully cut out, the next thing, for which some practice is required, is stabbing out the mid-ribs of the separate lobes of the leaf. The process of stabbing out is the same as for the outline, and the whole surface of the lobe is then shaved down in a slanting direction.

To give the lowered appearance of portions of a natural leaf thus lying upon a flat surface, certain parts of it must be cut away, and upon the skill with which this is done the artistic appearance of the leaf will depend. No one, however, would attempt to carve an elaborate design upon a frame who had not some knowledge of the first principles of wood-carving ; but our brief *r  sum  * of the method employed may encourage those who imagine carving to be an elaborate and unattainable art to make an attempt at mastering its difficulties. In reality, it is very simple, and but few tools are needed for it ; a few gouges and chisels, which can be bought at any hardware store, being sufficient for really elaborate carving.

After carving out any design upon the plain mold of which such a frame as we have considered is made, it would be necessary to color it and varnish it, or, if the carved design sufficiently covered it, the varnishing might be omitted, and the entire frame simply washed over with a mixture of umber and sweet-oil, or colored by good black ink, or any of the dyes in imitation of woods, which are to be obtained at stores for artists' materials.

In addition to such frames as we have considered, there are many of simpler kinds which can be readily made at home, for the purpose of occupying an hour or so of time pleasantly. Of such, for example, are the straw frames,

made by simply selecting perfect straws of different lengths and arranging them in rows of five each, the largest in the center, then a shorter one each side, and again a still shorter one. Four sides are thus prepared, and laid in the shape of an Oxford frame, the top and bottom being placed in front of the sides. Four ornaments are made for the corners, of three straws each, and these are fastened crosswise to each corner by means of a ribbon tied round, so that the place where the corners join is hidden. Three straws joined together, sewn to the back of the top, serve for a stand, and a piece of gay-colored ribbon across the center, to secure the picture in position, is a pretty addition to this little frame.

Some persons are particularly successful in making rustic frames, by simply arranging pieces of bark, nuts, seeds, etc., upon a foundation of plain wood, coloring the whole either with one dark dye, or in different shades, from dark brown to buff, and so making a pleasant change.

There is a very successful way of imitating wood-carving which is often resorted to in frame-work. A pine foundation, either square or oval, is stained with a decoction of Venetian-red and vinegar, and, when dry, rubbed thoroughly with emery-powder and varnished with Japan varnish. Nuts of different kinds are then colored in the same way, walnuts, Brazil-nuts, and filberts being best adapted for the purpose, the walnuts and Brazil-nuts being, of course, used in halves. After being colored and varnished they are carefully arranged upon the foundation with a mixture of leaves, cut out in sheep-skin and molded in leaf-molds, colored and varnished. When all are arranged in the design selected, and firmly glued in position, the whole is once more varnished over, and the effect at a little distance is very good. In the same way foundation frames can be decorated with shells by brushing them over with shell-cement, which is made by taking an ounce of gum trag-

canth and half an ounce of gum arabic dissolved in sufficient water to make a strong mucilage, into which the shells are sunk ; and, when the whole is dry, the spaces which remain uncovered are washed over with dark-brown dye.

Cones serve a very useful purpose in ornamenting simple picture-frames. The foundation for such an one might be of book-binder's pasteboard, and the scales of good ripe pine-cones could be sewed along the edges. Designs—as, for example, rosettes or crosses—can be made of the scales of softer pine-cones, acorns or buttons serving for the centers, and when all are in place the frame can be colored and varnished.

We have seen really beautiful frames made of such treasures as are found in country walks—odds and ends of bark, moss, acorns, nuts, etc.—artistically arranged and kept in position by strong glue ; but if such decorations are too elaborate, there is always the danger of some of the articles falling off or breaking away, for which reason we decidedly prefer simpler effects in the direction of home-made frames.

IX.

COLLECTING.

THE love of collecting is inherent in many people. We recognize the budding taste in children who will carefully treasure up buttons, bits of tin-foil, beads, and glass, to make collections; and, again, in growing boys and girls, whose "fossils" or "shells" are objects of deep interest and amusement. And the occupation of collecting is one that well repays all the trouble undertaken in its service. It is quite surprising to find how naturally interests spring up in connection with it, so that in time the simple habit of taking care of things grows into one of classifying and arranging them.

Almost every collection acquires a value if it is carried on for a sufficient length of time, to say nothing of that which naturally belongs to any occupation necessitating the acquisition of fresh facts. Collections of stamps, for example, so eagerly commenced a few years ago by boys and girls, ended in classified albums, and in specimens arranged with an obvious regard to their historical significance. No lad who studies his stamp-book can be ignorant of changes of rule and nationalities. Valuable information is thus acquired without any active effort; and so it is in the case of all collections, excepting those that are of absolutely valueless articles, and these are happily few, and pass away with the fashion of the hour.

The nucleus of a collection is soon formed. For ex-

ample, in the very matter of stamps, how easy it is to begin ! One or two from foreign countries can be pasted in a blank-book, and as others are met with at longer or shorter intervals, they are added. No sooner does that addition occur than interest is started, friends are asked to save those on foreign letters, exchanges are made, correspondence on the subject very likely entered into, and life-long friendships sometimes formed through this simple agency.

There is probably no more striking instance on record of the growth of a collection than that of Edward, the Scotch naturalist, who, from the simplest beginning, picking up here and there the insects he met with, and classifying them in his own untaught way, finally became known throughout the civilized world for the size of the collections he made. A poor working cobbler, he was such an enthusiastic naturalist at heart that he spent whole nights in rambling about the country adding to his collection of insects ; and, in his despair at his own ignorance, he entered into correspondence with eminent naturalists in his own country and in England, sending them his specimens by mail, to be returned to him named and classified—very often losing them by his confidence in the integrity of those he addressed. Such men as Edward are, of course, met with but rarely ; but the marvelous results which accrued merely from his persistently collecting and preserving his specimens afford a remarkable example of the possible growth of accumulations. Most people are familiar with his history ; those who are not, and who themselves have a taste for collecting, would be greatly interested in his biography, which has been written in a peculiarly graphic style by Smiles.

It is not to be supposed that, as an ordinary thing, collections taken up for occupation in our leisure hours will amount to anything in the least degree approaching that to

which we have referred ; but the most modest collection has a value and interest of its own.

Take, for example, one of fossils. There are many little books published nowadays which give such simple directions for naming and classifying them that a child can understand them ; and the soil of this country is so rich in such deposits that almost any one can start a collection of fossils, and a very little reference to authorities will enable a beginner to name and arrange them, even if no attempt is made to classify them. Dana's "Geological Story Briefly Told" would be invaluable to any one who has picked up specimens about the country, chipped off bits of rock, and become enthusiastic over fossilized relics. To such a one we would say : Try to gain some idea of the age to which your specimens belong ; ascertain, by comparing them with illustrations in books, in what strata they are found ; and it will surprise you to find how interest in your daily walks will grow with every fresh fact elicited. A very little knowledge will prove the high road to more. At first you possess, perhaps, merely a few isolated specimens—bits of feldspar possibly, attractive because of its sparkle, or quartz, charming from its crystallizations. No matter ; the first step is taken when the first specimen is carried home and compared with some description in any encyclopædia or hand-book. What an interest the first fossil has ! A stone is picked up bearing the distinct impress of a leaf. "How curious !" exclaims the finder. "Surely *this* is a fossil" ; and thence inquiry proceeds. A fossilized fern, carrying one back to the Carboniferous age, rouses at once interest and inquiry. It is carried home and labeled, placed perhaps on a shelf, and almost forgotten ; but the eyes that found it search instinctively for more, and in time some curious stone or crystallization finds a place beside it, and little by little a knowledge of the indication of each is acquired. Those fortunate persons who live near museums

have a ready reference at hand. They have only to look long enough to discover a *fac-simile* of their new-found treasure already classified and labeled. How pleasant it is when this happens ! it seems to dignify the little bit of stone or crystal, and to make it a valuable acquisition at once. And the taste for seeking out specimens once awakened, what treasures of knowledge are opened up ! The old child's story of "Eyes and No Eyes" is carried out every day in practical life. The eyes once opened to look for fossils, are awakened to a thousand facts hidden before. The mind takes in the striations of rocks ; every change in the soil is recognized as carrying with it historical significance ; visits to the rocky portions of the country have a new delight ; while the shifting sands of the shore are called upon to reveal their treasures.

A collector of fossils is like a person with second-sight. To him every particle of the earth's surface is fraught with meaning, and, his senses once fully awakened, new facts dawn upon him like a continuous revelation. We would urge every one to cultivate a taste for fossils ; it will lead to occupation for many pleasant hours.

Shells, too, afford immense interest to the collector. The idle hours spent upon the sea-shore are full of delight to those who are bent on collecting such specimens. What histories lie in the tiny shell tossed up upon some rocky shore, or drifted by mere force of current and the action of time into the quiet nook where sand must be sifted deeply to gain possession of it ! Each little treasure rescued from its hiding-place is another link in the great chain of Nature, has its own place in the grand march of Order, and is as indispensable to it as the collector himself. The seeker after fossils will here meet with many shells lying imbedded for centuries in rock, to tell, when found, their story of the wonderful changes and revolutions of the marine world ; while to the collector of shells there can be no greater en-

joyment than that of tracing the links which bind the brachiopod and mollusks of forgotten centuries to the clams and mussels of to-day.

Clearly, collections like these have a value of their own, deeper and more enduring in significance than many a valued jewel or priceless possession.

Interest of a more personal kind belongs to what may be called historical collections ; such are those of seals, old laces, *bric-à-brac*, and china. The collector of seals has a wide field, and one that will amply repay the effort necessary to secure specimens. Impressions of signet-rings dug up from the graves of long-forgotten potentates may lie side by side with that of some celebrity of to-day. Royal seals, seals that have been attached to documents rife with the destinies of nations, seals belonging to Masonic orders or to time-honored institutions, the seals of the different universities, to say nothing of the seals of persons distinguished in literature, science, and art—all have a value of their own. In England many collectors spend innumerable hours of leisure in making impressions of “brasses”—that is to say, of those brass tablets which are sunk in the stones of many chancels in the old churches of the United Kingdom. Such a collection is valuable to archæologists and antiquaries, but scarcely comes within the scope of home occupations.

The desire for the possession of autographs is a different matter. Such a collection, if well arranged, is of great value and interest to every one. It is often very amusing, on looking over a book of autographs, to gauge the relative estimation in which the celebrities are held. Some great men have realized handsome sums from the sale of their own autographs, and, indeed, it has lately become so serious a matter for persons of any celebrity to answer the calls made upon them for their signatures, that many have been forced to set a price upon them, and have devoted the pro-

ceeds to charities. And yet, directly a price is set upon an autograph, its value to the true collector is gone.

It is the difficulty of acquisition that lends zest to the occupation, and directly that difficulty can be overcome by the mere exchange of dollars and cents it degenerates into a matter of trade; while we do not, for a moment, mean to say that additions to collections should never be made by the purchase of rare specimens if they can not be obtained in any other way, certainly such a method of addition should be the exception rather than the rule.

The collections of wealthy persons are often lacking in interest for this very reason; and, as a pleasant occupation for leisure hours, collecting ceases to be legitimate when it becomes a mere matter of bargaining.

A collection of butterflies and moths is often a beautiful memento of a country visit, and there is no objection to it if the specimens are killed at once, as they can be, *painlessly*, by dropping chloroform or ether upon them; but sometimes the lingering agonies of insects make one wish that collections were forbidden by law. We recall one instance of a rare specimen of a horned beetle, which, after being twice chloroformed, persisted in writhing in torture, and, after being closely shut up in a small wooden box, horrified his captor by raising the lid and making a rapid descent to the carpet, to be re-captured, re-chloroformed, and finally to make his escape after all! This was, it is true, a remarkably hardy specimen; and generally the application of ether will prove sufficient to extinguish life, or, at all events, blunt sensibility.

What shall we say of collections of *bric-à-brac* and rare china? These are generally so essentially matters of price that they scarcely come within the scope of home occupations; every one realizes their charm, especially when historical interest attaches to a rare cup or vase; but such treasures, unless they are heir-looms, are rarely to be ob-

tained by simply seeking for them. They belong exclusively to the owners of long purses.

A collection of flowers, ferns, and grasses is always interesting, and the formation of an herbarium is an occupation that has immense advantages, so much is necessarily learned in the pressing, drying, arranging, and classifying of specimens. While botany in itself naturally forms a distinct branch of study, a great many botanical facts will be picked up in this occupation for leisure hours without direct study. Just as the collector of fossils and shells will gain an increasing knowledge of the revolution of the ages, so the collector of flowers will learn by experience how to classify the specimens and acquire a knowledge of the different portions of plants which is invaluable. "Botany," it has been said, "is only to be learned in fields"; and the collector who has brought home some rare specimen, examined and dried it, placed it apart, until another similar to it in characteristics can be found to keep it company, will be seeking out the fundamental principle of the science.

The taste for collecting is one that grows by what it feeds upon, and those who have never tried can not do better than begin. There is no surer indication of a happy cultivated home than that furnished by the existence of "hobbies," and there is no hobby at once so delightful, and so full of interest and instruction, as the "hobby" for making collections.

In every home where there are boys, the value of a collection of birds' eggs is well known, often branching out as it does into the acquisition of rare nests, and teaching much of the habits and classification of birds. Recently a new occupation has been suggested for those who lead active, outdoor lives, in the collection of "woods." The woods of this country comprise so many varieties that a collection of home woods could be extremely varied; and

as most trees have "burls" or excrescences, these can easily be cut off as specimens, and, while the bark is left on, the inner side can be planed, polished, and varnished. Such a collection once begun would lead to much interesting discussion, and soon grow, after the manner of collections, to comprise specimens of foreign woods obtained from traveling friends, and become, in course of time, of solid interest and value.

Then there are collections of monograms and crests, the interest of which depends rather upon individual taste than upon any intrinsic value, unless, indeed, the crests are those of notable persons, and have a heraldic significance, when, of course, they may be arranged and classified, and serve a very useful end in affording information which may partake of an historical character.

X.

MAKING SCRAP-BOOKS.

WHAT a variety of ideas the thought of a scrap-book conjures up ! What an old-fashioned thing it is, and yet how it stands its ground, not to be driven from the field even by that modern edition of the same idea—the album !

Everybody possesses, or has possessed, a scrap-book of some kind or other. How much pleasure it has probably afforded, how many heavy hours of sickness and convalescence have been beguiled by it ! The scrap-book is absolutely invaluable in the nursery ; from it the child gains his first ideas of pictures, of form and color ; then, later on, the growing boy has his book for quaint oddities and seraps, and the budding girl preserves all sorts of sentimental poetry—shows her appreciation of an author by copies of extracts copied into her scrap-book.

With what a smile of amusement at our forgotten selves we look over some old book of selections made in our fresh youth, in our ignorance of life, our enthusiasm, and anticipation ! How we copied moral sentiments, and underlined every other word ! How we delighted in fragments of Byron, and quoted from our recollection the eloquent utterances of a favorite minister ! Every one of us has done it. There have been times in every life when the scrap-book has played a most important part, and, after the lapse of years, how much sweetness and sadness hang about us as we turn the pages and remember the occasions upon which

this and that addition was made ! How joyfully we bought the book, and placed our name on the first page ! how fastidious we were over the first entries, how imperceptibly, as time went on, the insertions changed in character ! What histories lie hidden between the leaves—true histories of our inmost selves—each addition to our scrap-book a mile-stone on our mental journey !

The scrap-book proper is like a piece of patchwork, made up of odds and ends ; but it has many varieties, each one differing according to its individual possessor. The genuine scrap-book has no legitimate arrangement. Into it goes promiscuously all that interests, amuses, or strikes us, and, in turning over the pages of such an one, a recipe for clarifying jelly will meet us side by side with a quotation from Tennyson, Macaulay, or Longfellow. And such an *olla podrida* is not to be despised. It is a *scrap-book* ! How fascinating it is sometimes to fall upon such an one and rake it over, catching here and there at gems of thought which shine the brighter for the atmosphere by which they are surrounded ! And certainly there ought to be plenty of fun in a scrap-book ! Every witty addition that can be made should be made. Selections from humorists are always overpowering ; so, too, are the collections of funny sayings, comicalities, etc. The heaviest part of a dull magazine is invariably the joker's column, for a joke is like gingerbread—a little of it satisfies ; but in a scrap-book every joke is legitimate ; it is precious, and it ought to be preserved, for sad moments are sure to come, and the brief smile called up by an unexpected joke is not to be despised.

For such an ordinary scrap-book as this little is needed. Only a blank-book, a little paste, and a pair of scissors. Cuttings and clippings from newspapers, brief quotations, curious data, interspersed with notable illustrations, soon outgrow the volume, and there are many people who possess

quite a number of such collections of odds and ends. And very valuable people they are as acquaintances, for no matter what subject comes up, they are sure to know something about it, until "Just look in my scrap-book" becomes a family by-word.

There is as little system about this sort of scrap-book, indeed, less, than about the one destined for the nursery, to which we refer again merely to suggest that it should be indestructible, and for that end should be made up of pages of coarse linen, which can be bound with ribbon or overcast with silk at the edges, and upon which the pictures can be securely pasted, so that the pressure of little fingers can not roll them up or tear them out. Such books as these are invaluable in hospitals, and it would be no idle occupation for a leisure hour to construct such an one, choosing bright, lively pictures, if possible, with plenty of figures in them, which would suggest stories to be told to while away those tedious hours of weakness that are so touchingly endured by little ones in hospital wards. No one can realize the joy such a scrap-book can give to those whose homes are too often devoid of anything like pictures or books. The choice of colored scraps is so entirely one of individual taste, and often so limited by possibilities, that it is useless to say anything upon that subject; but we are not inclined to agree with those who maintain that inartistic pictures give false ideas of form, etc., to children. The children who delight in scrap-books are not usually impressed by the style of the pictures. The charm for them lies in the details, in the figure of a woman that represents mamma, or of the kitten that is the exact likeness to the little beholder of the nursery pet. To older children it may be well to exercise discretion, but for the little ones, let them have variety, color, and the semblance of familiar objects, and they are content; for them "*a spade is a spade, and not a garden implement.*"

With regard to more elaborate scrap-books, many sug-

gestions may be made. There are such varied possibilities in their construction. If, for example, they take the form of classified scrap-books, they may be arranged with systematic adherence to a plan, and become of very great value. One such we know of, belonging to a young lady, in which there are twenty-six classified divisions, each one of which represents a department of history, science, art, or biography. All scraps cut from newspapers, or extracts copied from periodicals and books, are entered under the head to which they legitimately belong; thus, after a while, facts are accumulated which are of real interest and value. If, for example, a celebrated man's name is the heading for one division, everything that is met with in reading concerning him will be entered under his name. By this means anecdotes relating to certain persons, facts in their history, dates, and other matters concerning them, are all systematically arranged, and the only limit to the information thus brought together lies in the reading of the owner.

A less elaborate scrap-book can be made by simply dividing it into three parts—as, for instance, facts, events, quotations—but this collection, however valuable, would never equal that already described.

Photographic scrap-books are delightful. They should be made of thick gray-toned paper, and all the photographs inserted should be unmounted and as far as possible classified—that is to say, those of persons should be kept apart from those of scenery, architecture, or statuary. Photographic scrap-books acquire distinct value with age, it being often impossible to obtain fresh proofs of old ones.

Inset books, as they are called, have a great fascination for many collectors, and come easily within the scope of home occupations, if not planned on too ambitious and expensive a scale. A book on any suitable topic is selected, and a copy procured, if possible, printed with extra large margins. The work is then carefully studied, and diligent

search made for portraits of all the persons, and views of all the places, mentioned therein. These pictures must be carefully mounted on paper or Bristol-board of the right size, and in due time bound into the volume. Inset books are sometimes planned on a grand scale, involving years of time and thousands of dollars of expense—as in case of an edition of Shakespeare by a New York collector, which required one man's time for two years simply to mount the pictures collected for it ; but any person may make an inset book on a simple plan, and find it a very fascinating task. It is not uncommon for the young people of a household to make collections of engravings ; but collections made for an inset book are much more definite in purpose, far more instructive, and, consequently, of greater interest. If one took a history of the Revolution, or of the Rebellion, or the biography of any noted person, and industriously collected all the portraits and pictures he could find in other books in the print-shops relating to the subject, he would incidentally learn much more about it than otherwise, and derive a great deal of pleasure from the occupation.

As a great many books have to be cut up in order to make an inset book, the cost is apt to be considerable ; hence, in projects of this kind, one must be governed by the amount he can afford to set aside for such a purpose.

THE USES OF CARD-BOARD.

THERE is certainly a great deal to be said in favor of inexpensive occupation. The possibility of making pretty things which shall cost next to nothing has very much to recommend it ; and for that reason it is well to consider what may be done with card-board, which can be purchased for a mere trifle, and is within the reach of everybody.

Common rough card-board can be turned to great account in skillful hands. Models can be made of it which will delight the hearts of children and satisfy the artistic requirements of older people. One of the easiest objects to model in this material is a house, or cottage—such, for example, as that in Fig. 22, for which we furnish diagrams. If the house is intended to represent one with rough-east walls, a piece of rough drawing-paper, such as is used for water-color drawing, can be pasted over the sheet of card-board from which it is cut. This must, however, be very carefully done ; otherwise, inequalities or blisters will appear. We should advise thin paste being spread over the drawing-paper, which can then be laid flat upon the card-board and covered with a sheet of waste paper, and then well rubbed down with a thick folded cloth, and, as it dries, a warm flat-iron can be rapidly passed over the surface with very gentle pressure. This method will be found exceedingly useful by those who, being distant from stores, are not able to procure exactly the kind of card-board they

want, as by this means it would be possible to add thickness and roughness to their smooth card-board.

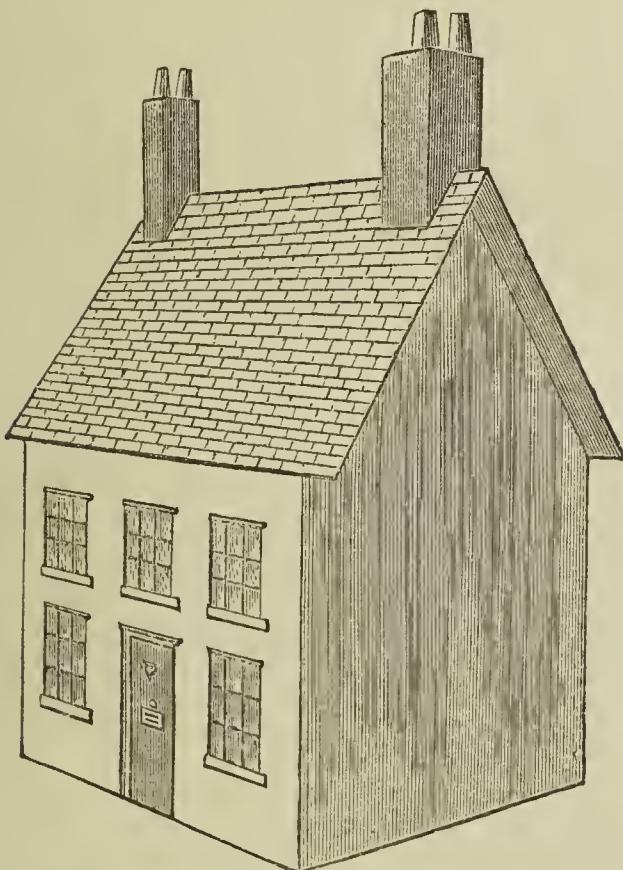


FIG. 22.—COTTAGE.

For the construction of the little cottage, which will make a pretty model, the first considerations will be the back, the front, and two gable-ends. For the gable, the rectangle, A, B, C, D (in Fig. 23), must be drawn on the card-board, two arcs being described by taking in the compass the length of the line B, C—B being the center for the first arc and C for the second, which will intersect the first at E, and so form the point of the gable. The lines from

B to E and from C to E will then give the general form of the gable-end.

On the sides of the square the slips F and G must be

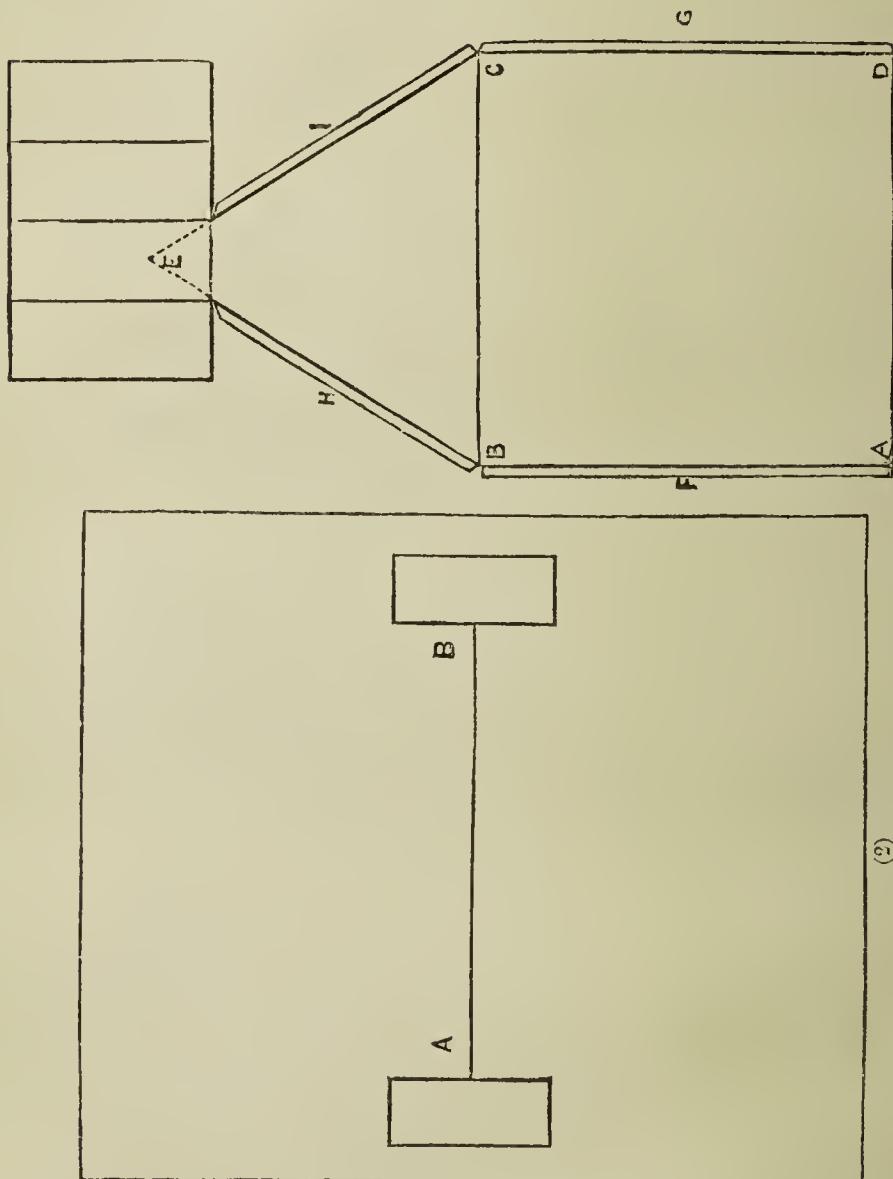


FIG. 23.—ROOF, GABLE, AND CHIMNEY.
(2)

left, the vertical lines being cut to about half the thickness of the card-board, the upper portion of the slips being

stripped off with a penknife, the remainder folded back at right angles to the surface, for the attachment of front and back.

Slips of the same kind are left at H and I, which must be bent down for the attachment of the roof. These slips on the slanting side of the gable will not extend as far as the gable-point, but the gable must be continued in the shape of a rectangle, which forms the sides of the chimney. This rectangle can be extended, and vertical lines may be drawn to mark the widths of the sides of the chimney-stack, which lines are to be cut half through, so that the sides can be bent into their places and the edges glued up. A piece of card-board is then put over the top of the stack, and over this the chimney-pots are placed.

If a smaller cottage than that suggested is wished, the gable-ends, front and back, can all be made in one piece of card-board, the lines at the angles being cut half-through, so that each part can be bent into its proper position. The roof can be cut out in the necessary shape, the length being slightly longer than that of the front of the cottage, to allow of the projection of the eaves. Fig. 23 gives the width of the roof both back and front, the line A to B being the center, and upon this line the roof is bent to fit to the same incline as the gable-ends. Before cutting out the different portions of the cottage it is a good plan to draw the windows and door. These can be painted in water-colors, or the windows can be cut out and glass pasted behind them. There is a very thin glass sold for mounting objects for the microscope which answers admirably for this purpose. It is well to color the roof before it is placed in position, and to mark the outline of the slates regularly. The chimney-pots can be made of card-board, either square or cylindrical, as may be preferred; and a tasteful worker can add window-boxes, a porch over the door, or any decoration that may be fancied. A garden can be made by sprinkling sand

over card-board prepared by mucilage, or moss for a grass-plot. Painted card-board leaves, to represent ivy, can be placed up the front and on the walls, and ingenuity will suggest various possible additions.

Toys of all kinds can be fashioned out of card-board, from dancing dolls to elaborate cabs, stages, and steam-cars, to say nothing of animals, which are most satisfactorily copied in this material. In fact, a sheet of card-board, a pot of paste, a pair of scissors, and a few paints, may furnish occupation and entertainment for many leisure hours.

Among the useful articles to be made of it, we may name wall-pockets, which are certainly more or less indispensable in all houses. Such an one, for example, in card-board fret-work, can be made by cutting a straight piece of card-board about eight inches deep and seventeen inches long, while a bottom is formed of the same material, seventeen inches wide, and two strips of card-board, each twenty-one inches long and three in width, form the front. These strips are first cut into twenty portions of exactly the same size, each one being then bound with scarlet ribbon. To connect the two, a strip of cloth of the same length and two inches wide is embroidered or braided in scarlet silk or braid design, and joined to either piece of card-board by crocheting a chain in scarlet or white floss silk. Through the lattice-work of the twenty card-board sections scarlet ribbon is run, while the whole of the inside is lined with silk or muslin, and the portions of the wall-pocket sewn together. A narrower strip of card-board, cut into smaller sections, and having the ribbon run through in the same manner, finishes off the top of the back. Scarlet and gray zephyr furnishes the suspension cord, and finishes off a very effective piece of work ; of course, the color is a matter of individual taste.

A still more useful pocket, for the reception of newspapers, letters, etc., can also be cut out in card-board, the

back part being eleven and one fifth inches wide, twelve inches in height at the center, and cut off slanting to the sides, where it should be nine inches. The front piece should be nine inches high, and the same width as the back. The material selected for covering can be a matter of choice. Plush or velvet would be handsome, while a design can be worked in raised embroidery for the center, and the whole finished off with a cord carried round the edge, and completed at the center by a fancy knot and tassels. There are no side-pieces to this pocket, and, as the front is not rounded off, it is necessary, to prevent the papers from falling out, to have the front and back connected in some way. This is effected by a lacing of cord, crossed at alternate holes, which are made in the ends of the card-board by a stiletto.

Pockets for the bed-head, stands for watches and rings, etc., will suggest themselves to the worker in plain card-board, while the uses for fancy card-board, either perforated, gold, or silver, are very numerous. A very pretty work-basket can be made by simply using perforated silver card-board upon a foundation or ground of ordinary pasteboard. To form the basket, two ovals are first cut for cover and bottom, each seven and three fifth inches long, and five and one fifth inches wide. The side must be three and one fifth inches high, and long enough to reach round the bottom. A piece of the perforated card-board, embroidered in a design of green leaves, purple flowers, and brown stems, worked in long stitch in floss silk, is placed over the strip which forms the side of the basket, while an oval piece to cover the lid is left plain. Sides and bottom are connected by over-hand stitches, and the cover is joined at one of the long sides in the same manner. To decorate the cover, the perforated card-board is lined with satin, which shows through it, while for the inside of the lid satin of the same color is quilted over batting, in diamond pattern, with white silk.

The cover is then edged with ruching, and a button and loop of silk or elastic serve to keep the basket closed. A handle is made of thick silk cord, or of the silver card-board simply scalloped out and worked in over-stitch, while the interior of the basket can be fitted with pin-cushion, little side-bags, and straps, to suit requirements.

Very pretty things can be made of this silver card-board by selecting the coarser qualities, and running narrow ribbons, or No. 1 velvet, through the holes in intricate designs. Patterns of all kinds can be worked in it in filoselle, or ordinary floss silk, and there is no limit to the fancy articles which can be made in it.

The most beautiful use, without exception, to which card-board can be put, is that of making raised or embossed work, which has been brought to the greatest perfection—so much so that a Maltese cross in perforated card will look at a little distance like one in carved ivory. The method of embossing is not exactly difficult, but it requires great care and nicety, and, if well done, should have the appearance of carving in relief. Such embossed work serves admirably for frames for pictures, caskets, shrines, etc. We will suppose a worker to have in view the manufacture of a casket with colored designs. The way to proceed is as follows: Handsome colored cards can be obtained at a fancy store, and as all must be of the same size, it is better to buy them in sets of four or eight. Supposing that there are eight, a box can be formed in four panels, two back and two front, while each end will require one, and the lid two. Eight pieces of card-board the size of the pictures must be cut, and then two other pieces, each one hole larger in every direction than the other. The three folds are gummed one on to the other, and held in position with a weight until dry. After the third row is in place, a fourth is cut, with four holes cut out in a square, leaving four and cutting four in length and breadth; then squares of three holes each way

are placed on these; next, little pieces of two holes each way; and, finally, tiny scraps of only one cross between the holes. When each is gummed in place, one above the other, the pictures are pasted down on the top, the panel being round them like a frame-work. In making this, it is necessary to count the holes in the card-board very carefully, the largest being of such a size that in each successive one smaller the reduction by one hole in every direction may allow of the last being a mere cross between the four holes.

Photographs of handsome statuary can be framed in panels of this kind and formed into artistic boxes. If the card-board is to form a cross in relief, the same method is pursued, only the strips are cut lengthwise without holes, the graduations taking place in the length, and never in the width. Initials and other raised work can be very prettily formed by cutting the bottom piece the full size of the original, and each successive piece one row of holes smaller each way.

The French and Germans bring this kind of work to such perfection that it forms a branch of instruction, and it is often extremely difficult to find out how the intricate patterns are made, while in fret-work card-board, as it is called, they perform marvels.

This fret-work consists in laying card-board upon a board or table, and with the point of a very sharp pen-knife cutting away the design decided upon. It is delicate and difficult work, from the exactness and neatness required. The knife should always be held firmly, and the incision made by a straight direct cut, never by one in a slanting direction. It must never be forgotten that every cut that meets another will bring the entire piece away. Designs in fret-work are best executed in the finest qualities of perforated card-board, and it can be used in all kinds of decoration. For example, in making a handkerchief-case, the prettiest effect could be produced by a combination of em-

bossing and fret-work. A square foundation of card-board could be so decorated, for instance, in scallops of graduated sizes of card-board for the corners; while a design in the middle might be cut out in an elaborate pattern in fret-work, the whole lined with deep crimson silk or velvet, the sides arranged in puffings over a bottom of plain card-board, simply covered with silk of the same color.

Book-marks, either of fret-work or of embossed work in card-board, can be mounted handsomely upon ribbon, and form most effective gifts; and there are so many pretty things of all kinds to be made in this material that we may well leave it to individual taste to select them, merely referring to one more, which will amply repay the time spent upon it, and that is a lamp-shade made of fret-work card-board.

Five pieces of the card-board are needed for this, they being a third narrower at the top than at the bottom. In the center of each an oval space is cut away, into which a picture or illumination is fitted, while around it a framework is made either by embossing or cutting away. If the latter style is chosen, pretty designs can be made by simply forming scallops round the edge and rounding off the corners at the top, so that the oval assumes the appearance of an arch; then pasting the strips together by lacing fine silk cord across from holes in one to alternate holes in the other, and back again.

Any one who has practiced fret-work in card-board will readily understand that there is almost no limit to the designs that can be carried out in it.

XII.

WHAT CAN BE DONE WITH BEADS.

BEADS have an interest of their own, for the use of them is as old as history itself. It is not definitely known where they originated, but the Egyptians used them, and probably learned how to decorate with them from the Phœnicians. There is in existenee, in the possession of a Captain Hervey, a bead found in an Egyptian tomb, upon whieh there is a hieroglyphieal inscription dating baek to 1500 b. c. Mummies have often been found deeorated with ornamental beads wrought in a kind of net-work, different sizes of beads forming the pattern.

The association between beads and prayers, too, is very ancient. The Chinese rosary has one hundred and eight beads, some of them of eoral, others of different stones and metals, and both Chinese and Tartar Buddhists wear them. The worshipers of the great Llama use beads in their devotional exereises, and the Mohammedans have chaplets of beads upon which they count the ninety-nine qualities of God, as detailed in the Koran. In almost all primitive nations beads are found by travelers. The Indians of Mexico and of New England have, from the remotest times, deeorated their belts with beads, ealling them wampum-paue, while they also use them to serve the purpose of money in trading, under the name of wampum.

Our own word bead is directly associated with religious eeremonies, for it is derived from the Anglo-Saxon “bead,”

prayer, or the Danish “*bede*,” to pray, and no doubt originated with the early custom of counting beads in supplication. We read of this in the very earliest records of the Christian Church. St. Augustine mentions them in 366, and Peter the Hermit had a series of fifty-five beads. Later on, the “*rosary*” became a very important feature in the church, and in 1202 Dominic de Guzman introduced the fashion of making it consist of fifteen large and one hundred and fifty small beads. The Druids used beads, and the Romans, when they invaded Britain, found many decorations and ornaments composed of them.

However rudely fashioned, the idea of the bead and its use is found everywhere. Beads of diamonds and pearls are, of course, the most precious, while the coral beads of India, and gold, silver, and amber beads, are always valuable.

Embroidering in beads was an important occupation in the Elizabethan days, and the history of needle-work teaches how often bead-work has been in and out of fashion. The value of beads varies a good deal, being dependent upon the material of which they are made, the perfection to which they are brought, and the place from which they come. For ordinary glass beads, Birmingham, in England, and Murano, a small town near Venice, provide the principal manufactories. They are generally made of tubes cut into pieces of the desired length, the edges being rounded by fusing, either with a blow-pipe or by the application of heat in some way or other. Every variety of material is used for the purpose of making beads, glass being, of course, the most common ; but crystal, steel, garnet, jet, coral, wood, and even paste, are all called into requisition. They are used for many purposes besides that of decoration, as, for example, eyes for dolls and toy animals, thousands of dozens being manufactured in Birmingham for this purpose alone.

Costly beads are made in imitation of pearls, and can be detected from them by an expert only. The pearly appearance is given by the mixture of liquid ammonia with the white matter from the scales of different kinds of fish, which is obtained by removing the scales from the lower portions of the fish, and soaking them in water until the pearly films fall off and settle in sediment. This sediment, dissolved in the ammonia, is injected into the beads, forming a thin internal coating ; then, in making the more expensive ones, liquid wax is poured into them, which makes them durable. We owe the invention of the artificial pearl bead to the French ; experiments were made in the reign of Catherine de Medici by a man named Jaquin, and since that time great improvements have been made in their manufacture, the inequalities of the real pearl being so exactly copied that it is difficult to detect the artificial from the real.

Many most beautiful beads come from India, where agate and carnelian abound, and where they are rudely made by simply breaking the stones with a mallet until they are the size required, and then chipping at them with a hammer until they are rounded. Polish is given by rubbing them upon a board covered with emery and lac, and then placing them in a bag filled with emery and the fine powder which was left after the stones were broken, and rolling them back and forth for ten or fifteen days by means of a thong worked backward and forward by two men seated at opposite ends of a room. Holes are drilled in each one separately with a steel drill.

Thus we see that in every country beads have been made and used. In the East, with the profusion that characterizes the people, large beads, made by the slow process described, are liberally used in making up ornaments for personal wear, while among ourselves there is scarcely a limit to the possible use of beads and bead-work.

Since trimming by beads has become the fashion, a favorite occupation for leisure hours is found in beading dresses, capes, bonnets, and hats ; collars made of beads are often worn, and we have recently seen brooches made of them, which are at least as valuable and suitable as those of imitation jewelry.

Beads for embroidering dresses are of various prices, according to quality and size. The iridescent beads, which are now so popular, cost from about fifteen cents a bunch in small sizes, up to fifteen or twenty cents for a single string. Pearls cost from fourteen to twenty cents a single string, and ordinary beads by the bunch can be bought from ten cents upward.

In our review of the many uses to which beads may be put, we will consider first their value as decorative agents in the home, and then the many articles of dress which can be made more beautiful by their use.

In the home, then, opportunities for their use are legion. Lambrequins for the decoration of brackets can be embroidered with them. Such an one made of deep-toned cloth, the design perhaps of a vine and grapes, would be beautiful if carried out in glass and pearl beads—the leaves in fine glass ones, with larger ones for the veins and tendrils, the grapes of assorted pearls of different sizes. A bead fringe round a scalloped edge would be effective if it were made of glass beads, with a pearl drop to each length. Twenty-five ordinary sized beads, with a pearl bead as foundation, would make the lengths for a handsome fringe.

Banner-screens are beautiful if well embroidered in beads. Care must be taken to place each bead in the same direction, and fasten it securely at the back, so that the whole design, when finished, may appear perfectly equal in a sort of raised relief. White beads, upon deep-colored grounds, are always effective, and so also are the iridescent kinds upon dead white. A banner-screen of white velvet, embroidered

in iridescent beads, and fringed with them, then mounted in ebony and lined at the back with shaded satin, would be a handsome piece of work.

In the same way, standing-screens, embroidered in beads, are extremely effective; but it is well to remember that steel beads, which are largely used for the purpose, tarnish very readily, and it is better to be content with plainer kinds for such decoration.

Hanging-baskets, to hold flowers, are easily made. For them different sizes of beads are necessary—the large square-cut varieties, and the smaller ones—and if two colors are chosen, the effect will be better. Green and white, for instance, always look well together. The materials needed for such a basket are bonnet-wire, two ounces of large beads, large enough to pass over the wire, and three ounces of small glass beads. A circle must be made of the bonnet-wire, about three quarters of a yard in circumference, and the green and white beads passed over it alternately, until it is covered, when it can be fastened in circular form by merely twisting the ends of the wire together. From this rim, or circle, the work proceeds. Two smaller hoops are covered in the same way, and the three are connected together by cross-bars, made of lengths of very fine wire or coarse thread, covered with beads, and fastened at equal distances, say between every sixth bead, all round each circle. When the work is accomplished thus far, a very small ring forms the base, and the frame-work is complete. Twenty-four little tassels are now made for the upper rim, which consist of twelve lengths of twenty-four small white beads, ending in one large green one. These tassels are arranged at equal distances round the top rim, and the same, somewhat smaller, round the second and third, while from the base depends one of double the size. Three equally long strings of the large green and white beads are fastened to the upper rings, and joined together at the ends with

a rosette or tassel of beads, and these serve as hanging supports to the basket. Such a basket can serve either to hold a pot with a blossoming plant, or a saucer filled with cut flowers can be placed in it. Trailing plants, growing in a hanging-basket of this kind, furnish a window admirably.

There is another and perhaps simpler method of making such baskets, although, in our opinion, it is not so effective. This consists in making a net-work of beads by fastening flexible wire or coarse thread into a ring, and so forming other rings, one within the other, each an inch in diameter, so that as the work progresses it looks like net-work; a fringe of beads can be sewn around the upper circle of rings. Of course, each circle is made somewhat smaller than the last, so that at last it is reduced to one sufficiently small to form a base, from which a tassel may depend.

Wall-pockets are made in the same way. Large German beads are the best for such a purpose, and it is well to cut out the size and shape the pocket is to be, so that the rings can be made of the right size and number. A bright satin lining looks very well, as seen through the rings, and the effect is heightened if it is left loose, so that it can be slightly pulled through them, and present the appearance of honeycomb. The back for such a pocket should be cut out in stiff card-board and covered with satin, or less expensive material of the same color. A handsome bead fringe would complete the pocket at the upper edge, and two long tassels could depend from either side.

Many small baskets are decorated by simply nailing a bordering of scalloped cloth round them, and covering it with a heavy double fringe of glittering beads; and such fringes are readily made, and can be adapted to many purposes, as, for example, finishing off decorations made of other materials. Pincushions are handsomely decorated by raised bead-work. The usual method for producing the raised

appearance is by padding. Thus, supposing a design for a pincushion of flowers, leaves, and fruit, cotton-wool is sewn firmly upon all the portions that would be raised naturally, and the beads are threaded and placed in rows over the leaf or fruit. This must be done with strict regard to evenness and regularity.

Beads are specially suitable for geometrical designs, and any pattern arranged in squares or sections looks well carried out in beads. All patterns intended for old-fashioned Berlin-work can be satisfactorily executed in beads, and the same effect is produced in what is known as bead tile-work, or beads applied to hard, flat surfaces. This is accomplished by first tracing the design to be executed upon the material (let us suppose it to be of wood), and, when it is dry, washing it over with transparent cement—which can be made by dissolving gelatine in acetic acid, or white gum dissolved in vinegar will do. A wooden handle, with a small bead-needle fixed in it, which is known as a “lifter,” is required to help in picking up the beads, which must each be carefully placed in position while the gum is wet. Smooth, round beads answer best for this work, while bugle or sparkling cut-beads can be introduced, if the effect is needed. When a large space is to be covered with beads of the same size and color, they may be strung upon silk, and the whole string fastened on at once. In working figures in this way, it is well to do the outlines first, and fill in the figure very carefully, one bead at a time. As the cement dries, a fine camel’s-hair brush will be required to moisten the spot where the bead is to be placed. Individual taste will be the only possible guide in such work, but we may suggest that mosaic patterns are admirably adapted for it, and that outlines of black beads are very effective.

When the work is completed, and still damp, it should be pressed with a hard roller, or pad, and laid under the weight of a heavy book, and, when thoroughly pressed by

this means, a piece of soft paper should be placed over the whole, and a hot iron held over it lightly.

It is well to go over all the interstices or crevices which may remain with a brush dipped in linseed-oil; it can then be dusted over with pulverized whiting by means of a stiff bristle brush, which can be well worked into the crevices. A silk handkerchief will give the beads the necessary polish if they are well rubbed over with it, and such a piece of work will last for any length of time.

Waste-paper baskets are very suitable for decoration by beads. They are not specially slight objects at any time, but an ordinary wicker-work basket destined for this use can be made really handsome by a judicious use of beads. The large ones, known as German beads, lined with foil, are best for this use. They should be strung upon strong hoop-wire, and, a foundation being made of a wide, strong hoop fixed round the bottom of the basket, a sufficient number of lengths thus beaded can be fastened to it at intervals, and again securely fastened to the upper rim of the basket, and other strands of beaded wire run over and under these all the way round and over the entire surface, making a sort of plait. Over the rim of the basket, hoops of wire, covered with beads, can be placed intersecting each other, and below them loops of chenille would be effective; while heavy bead tassels could depend from the handles. A lining of muslin or silk of bright color would finish the homely waste-basket off in such a way that it would be quite transformed.

Beaded frames are easily made by thus mounting beads upon hoops of wire, and arranging them at equal distances; and every one is familiar with the elaborate designs made in beads for the Roman Catholic cemeteries—circlets of beaded wire inclosing a cross or favorite symbol or monogram.

The combination of beads and wire, of course, suggests

many elaborate possibilities, such as watch-stands, baskets, and other articles which can be outlined in wire and filled in with beads ; but, generally speaking, such work is very difficult and is seldom successful, and we therefore prefer to limit our suggestions to articles which are thoroughly practical, and likely to give pleasure in proportion to the time bestowed upon them ; and we turn now to a consideration of the value of beads for matters of personal use.

Some of these are mounted on wire, such as bouquet-holders, stars and crescents for the hair, wristlets, and brooches ; while others require patience and skill in designing or embroidering.

In making a beaded bouquet-holder, which will be found rather a satisfactory piece of work, the first requisites are fine and coarse crystal beads and silver wire. Twelve pieces of the coarser silver wire are cut in equal lengths of eighteen inches, and laid together in a bunch, over the ends of which a wooden knob with a hole in it is passed to the depth of five inches, while the ends are closely bound together with silk, and large crystal beads passed over them up to the knob ; and then the wired end is turned up double, so that it forms a loop below the knob, the ends being, if possible, again passed into the hole, and, if not, securely fastened below it with wire. The eighteen longer strands are then divided, six of them being finished off at the end by turning them back to the shape of leaves, first having strung them all the way up with crystal beads. The center of each leaf, as thus formed, is made of a smaller strand of wire, on which the same kind of beads are closely strung. The remaining twelve strands must be firmly fastened round a rim under the six leaves, and then a basket-work of beads is formed by interlacing thinner wire, covered with finer beads, under and over each strand. At the base, where the knob is above the loop, leaves are made in the same way as the larger ones, and turned down over the knob, thus com-

pletely covering it. A heavy fringe of beads would answer the same purpose.

Such a holder can be made in iridescent beads, if preferred, and, if well made, is very effective.

Very pretty butterflies are easily made by the amateur workwoman. Flexible wire is easily shaped into any form, and that of a butterfly is an easy one to begin with ; the space between the outlines can be filled in with any light material, or with velvet or silk, if a design is to be elaborated upon it. The horns are made of the finest seed beads strung upon very fine wire. Black net butterflies are simply cut out in black net or gauze, and worked in bugles and round beads of different sizes, the raised appearance of the body being given by padding. Ear-rings, to represent butterflies, have been made of cut-jet beads on wire, and have often been mistaken for jewelers' work. Fine thread-wire or horse-hair serves best for threading beads for working elaborate designs, as it is so easy to join the different parts together in these materials.

A pretty and effective ornament for a hat can be made by taking an old buckle and covering it with colored silk, then sewing iridescent beads regularly upon it ; and many ornaments which are expensive to buy can be readily made at home by just such means.

The iridescent beads used as trimming are very valuable in the matter of personal decoration. Quite elaborate designs can be worked in them, it being only necessary to outline the pattern carefully upon the material, and then see that all the beads lie the same way. The iridescent gimp and fringe which cost so much can be easily made at home.

Beading lace is a favorite occupation with many ladies, and one for which a variety of uses can be found. Spanish lace embroidered in pearls is wonderfully handsome. We have seen a ball-dress of white satin trimmed entirely with

such beaded lace, the corsage being almost composed of it, every piecee having been beaded at home as the oeeupation of leisure hours.

In beading bonnets, bugles are largely used, and any lady, by drawing a handsome design upon black net, can produce a crown which shall exceed in beauty anything that she is likely to find at her milliner's. The fringes for the edges of bonnets and hats, in the same way, are easily made ; while beaded ornaments for which a great price is asked need cost a clever worker nothing but the priece of the beads themselves. Beaded buttons, for example, are expensive, and how easily they are made ! It is only necessary to cover ordinary forms with silk or net, and then sew the beads on with regularity and precision.

Small Venetian shells are often used in bead-work. They can be bought already perforated with holes, and, in conneection with iridescent beads, make an effective trimming.

XIII.

AMATEUR PHOTOGRAPHY.

THE popularity of photography as an occupation increases every day, and with this increase we have a corresponding decrease in the expense attending it.

There is no doubt that the charm of reproducing familiar objects, scenes, and persons, is a great reward for all the care entailed in the art ; but it must not be forgotten by the amateur photographer that no amount of skill will compensate for want of care and accuracy. Photography requires absolute cleanliness, and the slightest inaccuracies in following the directions will result in inevitable failure.

The increasing interest taken in the art reminds us how many improvements have taken place in the necessary implements since the time of its first introduction to public notice. The dawn of photography was already near when beautiful images of scenery were depicted by the camera obscura, and Mr. Fox Talbot, who was an enthusiastic believer in the possibilities of the camera obscura, has described the way in which the idea of photography first took shape in his brain. He had been attempting to sketch by aid of the camera obscura, and was discouraged by the miserable imitations his pencil produced, when he was led to reflect "how charming it would be if these beautiful pictures, which the glass lens of the camera threw upon the paper, could be induced to remain fixed upon it ! Light can exert an influence sufficient to cause

changes in material bodies ; why should it not exert such an influence upon paper that the paper should be visibly changed by it ? If it can, then surely some effect will result having a general resemblance to the cause which produced it, so that the variegated scene might leave an impression behind, stronger or weaker, according to the strength or weakness of the light brought to bear upon it."

This was the thought from which all modern photography sprung. Mr. Talbot commenced a series of experiments, and laid the foundation of the new art science ; and now it has been brought to such perfection that the waves of the sea, ships in full sail, a train at full speed, and even the ball issuing from the cannon's mouth, may be reproduced with a truthfulness which can not be reached by other means.

Amateurs are, of course, scarcely likely to attempt such feats as these, although, no doubt, "instantaneous photography" will soon become comparatively common. But as we are considering the matter in the light of a pleasant recreation, and not as an art, we will content ourselves with a consideration of the easiest method for beginners of producing pictures.

First, then, comes the practical question of equipment and expense. Until recently, the purchase of a photographic apparatus involved a good deal of outlay, and the machinery was so clumsy that the fact that it was impossible to carry it about was a serious drawback to the enthusiastic amateur. Now, however, portable photographic machines are made, and their low price brings them within the reach of every one. A camera, with double dry plate-holder, for making pictures four by five inches, and a single achromatic lens, with the ease in which to stow them away and pack them up, plate-holders, a lens and tripod, can be bought for ten dollars. Formerly the lenses themselves cost that amount.

For amateur work this camera is sufficient, and, when some skill has been attained, it is always easy to buy a more expensive outfit. After the camera, the requirements for photography are : Solution of nitrate of silver and collodion ; a small glass measure ; two or three porcelain dishes ; and a stock of glass plates of sizes suited to the camera. And, in addition to these, a small stock of albumenized paper, which can be bought at the art stores ; silver solution, on which to make the paper sensitive to light ; a solution of gold, to give the prints their tone ; and a solution of hyposulphite of soda. The size of the camera decides the proportions of all the other requisites. It is best, on all accounts, to buy the chemicals and acids ready prepared, and, having every thing in readiness, to consider next how to begin, what picture to take, and what the difficulties to be contended with really are. The greatest of them all will be that of procuring a room where absolute darkness is possible, for the purpose of setting the plates. A single ray of white light will spoil the best negative in the world, and it is surprising to find how difficult it is to obtain absolute darkness.

A closet sometimes answers the purpose, and in it must be kept the baths or pans for holding the chemicals, a supply of clear water, and a vessel in which to put it away after using. Dry plates require constant washing, and the greatest care is needed in keeping them from dust, as every speck of it comes out in the picture in tiny spots. The plates are, of course, always kept in this dark room, and in it, too, they are placed in and taken out of the plate-holder.

The chemicals require to be mixed before using them for the development of dry plates, and the best way to prepare them, is to take two ordinary glass preserve-bottles and put about a quarter of a pound of neutral oxalate of potash in one, and the same amount of protosulphate of iron in the

other, pouring warm water upon them to dissolve the crystals. This constitutes what is called the saturated solution—that is to say, the water absorbs all the chemical matter it can take up. The chemicals will all be dissolved in about twenty minutes, and the solutions should then be carefully filtered into bottles and corked very tightly.

The solutions ready, the next point is to clean the plates. This can not be too carefully done ; they should be rubbed on either side with a piece of clean flannel, and some authorities advise their being washed in spirits of wine mixed with tripoli-powder, which will remove any possible grease-spot. After rinsing and washing the plate, it should be polished with a perfectly clean cloth, and be entirely free from marks or scratches.

The next operation is to cover this clean plate with collodion which has been bought all ready for use. In case, however, it should run short, the amateur may like to learn how to prepare it. It consists of gun-cotton dissolved in equal proportions of ether and alcohol, and must be kept carefully corked, as the ether evaporates. The operator in covering the plate with this preparation takes it in the left hand, holding it as level as possible, and pours on to the center a pool of collodion sufficient to cover it, by first turning it toward the thumb, being careful not to touch it, and then turning it to the top left and right corners, pouring it off at the lower corner into the stock-bottle. As soon as the preparation sets upon the plate, it may be placed in the nitrate-of-silver bath, being moved from side to side in the bath for a minute or two. Then, if no greasy marks appear upon it, it may be taken out and placed in the holder ; but if it looks the least greasy it should be left for a longer time in the nitrate of silver.

All these preparations having been made in the dark room or closet, the plate is now ready for exposure. The camera is supplied with a *dark* slide, and in this the plate

is placed, the coated surface being downward and toward the lens when in the camera.

Most amateurs wish to take portraits, and, in their efforts to do so, they may be sure of finding plenty of amusement ; but these portraits are hardly likely to be successful as likenesses, and it would be better to begin with something stationary, and less likely to disconcert expectations by an undesirable wink or smile. The first step in any case is to focus the object decided upon. A house is the best, perhaps, if the experiment is made out of doors ; if not, a picture or any article of furniture may answer the purpose. A few attempts will soon show the proper focus, and the cap being removed from the camera, the plate is exposed. The time of exposure varies with the light, and can only be decided by experiment. It is well to try first with a six-second exposure, after pulling the slide about half out, then to pull out the other half after another six seconds, and the condition of the plate will soon show which was correct, or most nearly correct.

The appearance of the picture on the plate is called the "negative," and this has now to be developed, which operation must take place in the dark room. About four ounces of the developing mixture should be poured into a cup, and then allowed to flow carefully over the plate. The image, if the impression has been a good one, will appear almost as soon as the solution is poured on. The plate must then be held under a tap of running water, and thoroughly cleansed from all grease ; then placed in the alum solution. It is then ready for "*fixing*," or washing in the solution of hyposulphite of soda, which must be poured on the plate and remain there about twenty minutes until the surface is clear of the iodide of silver, which, if the plate were exposed to the light, would appear as a creamy film. The hyposulphite removes everything from the plate which is not required to form the picture ; and when the plate is taken

out of the solution it must again be thoroughly washed, then placed in an upright position to dry, when it is ready for varnishing. The varnish is bought, like the chemicals, ready prepared, and is poured over the negative just in the same way as already suggested for the collodion. The object of the varnish is to protect the film which the developing solution has spread over the negative. The varnish should be applied while the plate is warm, for which reason it should be held to the fire a moment before the application.

The varnished negative is now ready for printing off, and if any delay occurs before this is done, it must be very carefully placed away where no dust can possibly settle upon it. Envelopes are especially sold for this purpose, and there are also boxes, called "negative-boxes," with divisions to accommodate the negatives.

The operation of printing photographs is not difficult. The paper for the purpose is bought already prepared, and is called sensitive paper, and this is first cut into pieces of the size desired. Each sheet of paper will supply sixteen pieces four by five inches in size.

The glossy side of the paper is the sensitive side, and this should never be touched by the fingers ; it can be cut into as many divisions as are needed by a paper-cutter. In addition to the paper, the amateur must be provided with two porcelain trays, one printing-frame, a bottle of chloride of gold, a quarter of a pound of acetate of soda, one ounce of chloride of lime, and the hyposulphite of soda.

The prepared paper is made sensitive to light by floating it off in a solution of nitrate of silver, containing sixty or eighty grains to the ounce. When it is dried it is ready for the process of printing, which is a very easy one. The varnished negative is placed in the printing-frame so that the film side is up, and the sensitive paper is placed upon this, the glossy side being downward. The frame is

provided with springs, and, on pressure, the contact of the paper with the negative is tightened.

The sensitive paper should be placed in the frame in a subdued light, and, when well closed up, the frame should be put upon the window-sill, or in some position where the light will fall lightly upon it. It is well to move the frame from time to time, open it, and inspect the print by bending the paper back. If the print appears dark, it must be taken out and laid away in a dark place, while if it is too light, it must be left a while longer in the frame. It is never well to drop the negatives into the frame ; they should always be put in slowly and gently, and, as another precaution, the print should always be examined in a dim light.

However carefully the operator may have proceeded so far, the success of the picture will depend in a great measure upon the concluding operations of toning and fixing. Before entering upon this branch of the art, all the solutions needed should be in readiness.

The best toning solution is made by dissolving fifteen grains of chloride of gold and sodium in seven and a half ounces of water, then adding to it three hundred grains of acetate of soda and seven drops of a saturated solution of chloride of lime. This preparation should be made the day previous to using ; it will keep well, and it is always ready for use. Clean water is first poured into one of the porcelain trays, and the print to be toned is placed into it. The light should be shaded so that it is only just possible to operate with certainty. After the prints have soaked for a while the water must be thrown away and fresh supplied ; this should be done several times, the last time the print being left to soak thoroughly, while the toning bath is prepared by taking an ounce of the prepared solution in the other tray, and well mixing with it seven ounces of water. The print is then drained dry and placed face downward

in the solution, then leisurely turned over and left to soak for a while. When, by examination, the whites appear clear, the print has been sufficiently toned, and the toning solution can be poured off and bottled away for future use. After the prints have been washed once more by letting clear water run over them, there remains only the final process of *fixing* by placing them in a solution of four ounces of hyposulphite of soda, one ounce of salt, half an ounce of washing soda, and mixed in thirty-two ounces of water.

This solution should also be prepared a day before it is wanted, and warmed slightly. The print is laid into it and left for about twenty minutes, when it is taken out, once more well washed, and hung up to dry. The washing should be very thorough, the purpose being to remove every trace of the hyposulphite of soda. To accomplish this thoroughly, Mr. Newton, a very successful amateur photographer, published the formula used by himself. He prepares a stock solution by dissolving two ounces of acetate of lead in sixteen ounces of water, and, after the prints have been washed in several waters, he adds to the last water-bath two ounces of this preparation, leaving them in it for ten minutes, then removing them, washing them again in clear water, and hanging them up to dry, when the mounting only remains to be done.

The successful mounting of a printed photograph depends mainly upon its being thoroughly pressed before it is pasted on to the card. The best paste for the purpose is that made by melting four ounces of Nelson's No. 1 gelatine with sixteen ounces of water. The paste should be applied quite evenly to the back of the print with a bristle brush, and then with care it is held over the center of the mount and laid evenly down; then covered with thin paper, and pressed very carefully with the hand or a roller.

Instantaneous photography, which is so much the fash-

ion now, depends almost entirely for success upon the highly sensitive condition of the plates. There is no other secret about it ; but experience only can teach the amateur the appropriate moment for experimenting in this way with any hope of success.

The successful amateur photographer will always desire to introduce tints or colors into the picture he has taken. After a few trials, there is no question that an attempt will be made to take portraits, and when once this charming art is acquired, it needs but a little knowledge of coloring to perfect it. For this reason we subjoin some very clear suggestions on the subject, offered by an experienced photographer for the guidance of amateurs.

A clear photograph should be selected, and carefully freed from grease by rubbing it gently with India-rubber, which must be very carefully done, otherwise the albumen will be apt to come off, thereby rendering the picture unfit for the reception of color.

The best colors and sable brushes must be used, some fine ones for stippling, and thicker ones for washing. The colors are to be mixed with water, and with a small quantity of " Robertson's Glass Medium," which gives a gloss, and is especially prepared for the albumen surface. A pale wash of vermillion must be applied to the face and hands ; when that is dry, the cheeks may be stippled with rose-madder, but the color must not be too deep ; a pale wash finely worked in will give a delicate, soft hue which can never be attained with deep colors. To give a rounded appearance to the face, neutral tint, or a very pale wash of ultramarine, should be used. For a very fair person, a thin mixture of chrome-yellow and Chinese white stippled lightly on the forehead produces a good effect. Lips should be colored with vermillion, but not too deep. For flaxen hair, a wash of chrome-yellow will be sufficient; if golden or very light brown, a pale wash of burnt sienna ; if darker brown,

sepia ; and the shadow can be put on in indigo. These colors nicely blended will be found sufficient for the ordinary portrait-photograph, but if the picture is intended to wear in a locket or book, more attention must be given to detail.

The coloring of furniture and of drapery is done altogether by washes, and must vary according to individual taste. Vandyke-brown, burnt umber, or sepia, are good to represent mahogany. It is often necessary to stipple some of the drapery after washing it over.

Some colors are difficult to manage : ultramarine, for example, for a blue dress or sash, and mauve, which is composed of lake and ultramarine—these require careful working up ; but a wash is sufficient when only black, brown, or green are necessary. The shades of a dress are managed by going over two or three times with the same tint, never taking much color upon the brush at a time.

Of course, those who know something of painting in water-colors will be more successful in coloring photographs than those whose attempt at the art is thus made for the first time ; but, in reality, there is no necessity that the operator should have any previous knowledge of painting. Any one can learn how to handle the brush or pencil, and the colors are all classified in the ordinary paint-box ; and there is no more pleasant occupation in the world than that of coloring photographs. A very few failures will lead to success.

There is a very simple method of making impressions on paper in blue, known as the blue process, in which all the difficulties of toning and fixing the print are obviated. It is adapted for reproducing mottoes, drawings, manuscripts, etc., and, when the negative is varnished, the process is very simple. The negative is placed in the printing-frame, film side up, and a piece of what is called “ ferro-prussiate ” paper, which can be bought at the

artists'-material stores, is placed upon it, colored side down. When firmly fastened into the frame, it is carried to the window, and the front side of the frame is turned out to receive the light upon it for three or four minutes. When, upon examination, the image is distinctly seen on the paper, the print is placed in a pan of clean water for half an hour, when the whites will stand out clearly and the blue print will be permanent.

MISCELLANEOUS OCCUPATIONS.

THE busiest people in the world have some leisure moments, and it very often seems as if the more occupied a person is in home life, the more can be accomplished in the spare moments. The reason probably is that to a busy person every moment is precious, idleness is impossible, and so it comes to pass that more is done at odds and ends of time than would be accomplished in the days or weeks of an idle, unoccupied life. Up to this we have dwelt rather upon occupations for leisure hours, to be carried out with a certain amount of method, and we now propose to call to mind the many valuable and pretty things which can be made in odd moments of time, requiring no special preparation, and entailing no particular expense or laying out of plans.

Take, for example, the many wonderfully pretty things that can be made in plush or in silk and satin, in patch-work, or even in odds and ends of ribbons and lace. The old-fashioned patchwork, for instance, which was often a marvel of effective combinations, and which served to fill up many a leisure hour in the lives of our energetic grandmothers, has undergone a change, it is true, but exists in our midst with surprising vigor. The fashion nowadays is to cut out squares of equal sizes in thin muslin, or indeed in any used or worn material which will serve for a foundation, and upon each of these squares seraps of silk, satin,

ribbon, or plush are carefully arranged, without any regard to a set pattern, and are joined together with fancy stitch—as feather stitch, open-work stitch, or simple outline stitch—in different colored silks. This style of patchwork affords ample scope for individual taste. Of course, no two of the squares show the same arrangement, and a sort of bewildering Eastern effect is produced by the mosaic appearance of the square when completed, which is, of course, increased when the several squares in their turn are joined together. One great charm of this work is that it can be taken up at any moment, and the variety of stitches introduced need be limited only by the skill of the worker. The tiniest odds and ends of ribbon can be worked in, and any little space which may fail to be covered can be worked in raised stich or French knot, or button-holed in outlined design. The amount of work in such patchwork depends upon taste and the use for which it is intended. For example, if such an undertaking is intended for a bed-quilt, it will admit of larger scraps being used ; while for a pin-cushion cover, or to lay on a tray or upon a table, tiny scraps and small odds and ends would look charming.

A quilt for a baby's bed made in this style of patch-work would be lovely if subdued colors were selected, and each little patch worked over with a star in gold twist, or if gold-colored filoselle were used for all the joinings. Combinations for such a purpose will naturally suggest themselves to individual workers. Patch-work rugs are more formidable undertakings, being made of odds and ends of cloth very firmly stitched together, and, when finished, pressed at every seam with a heavy iron, lined with some strong material, and finished off with a worsted or ball fringe.

It is now possible to buy "carpet" materials, so that ladies who are unable to afford the expense of the fashionable Eastern rugs can manufacture them at home, and

very pretty they are. The modern taste for plusses has opened up a very large field for the construction of pretty things. The material itself is so handsome, and it is so firm, yet yields so readily to the needle, that endless possibilities for its use suggest themselves. Old photograph-frames covered with it look like new, and nothing more effectually throws a picture into relief. To renovate an old frame in this way it is only necessary to cut the plush large enough to cover the entire frame, allowing sufficient material to fold over end and sides, then laying it face downward upon a perfectly flat board. The back should be covered with thin, home-made paste, composed either of flour and water, or of mucilage made of gelatine and water; and, when a thin coating has been brushed well over it, it can be stretched loosely over the frame, and left to dry. The space for the glass should be cut out after the plush is firmly gummed on, and there will be sufficient to fold over all round the opening. Various effects can be given to a frame of this kind by putting in little brass nails at intervals, or small beads, or indeed anything of the kind that fancy may suggest. Painting on plush is not at all difficult. Any one who has oil-colors, and a stiff bristle brush to stamp the colors well in, can succeed with little effort. Small plush panels to stand on the mantelpiece are very easily made by covering thin wood with the material, and just painting a single spray of apple or orange blossom, or a bird on the wing, or, as we have seen, a flight of many-colored butterflies.

Many avenues of occupation are, of course, open to those who can handle the brush, and the uses for plush in combination with colors are legion. Screens for the mantel-shelf, coverings for little shelves, lambrequins of all kinds, can be made of plush, and either decorated with designs in oil-colors or simply trimmed with heavy fringe. Pincushions of plush are very handsome; so are glove-boxes, trays,

and brackets. The material has so much body that a cardboard box covered with it is as substantial as many a wooden one. For banners, a very good effect is produced by having a strip of plush between two strips of silk, varying the tones of each, then scalloping in three large scallops, and finishing off with fringe. Bracket lambrequins, too, are extremely pretty if trimmed with plush, the lambrequin itself being either of cloth or silk.

Quite recently we have seen a very pretty effect produced, with little trouble or expenditure, by one of those busy people who find time for everything, and who, although engaged in office-work from nine till five, have an occupation on hand for every spare minute. The latest result achieved by this lady has been that of purchasing a little image in bas-relief, gilding it, and mounting it upon dark-blue plush. These bas-reliefs in plaster of Paris are very cheap, and, even in their natural condition, make pretty ornaments, while, when gilded over, they stand out from a background of deep-toned plush or satin in a most effective manner. Blue velvet-paper also serves as an efficient background for such an ornament.

Palm-leaf fans afford a good deal of pleasant occupation; they take water-colors well, and so can be painted; and for those who are not efficient in the use of the brush, they afford an opportunity for embroidery in open stitch round the edges.

Making transparencies is a fascinating occupation, requiring a little taste and artistic skill, but quite within reach of the home-worker. If they are intended for a window, the material for making them can be bought at an art store under the name of "architects' paper," but muslin of thin make will answer the purpose if painted over with liquid wax and left to dry. To paint it, it is advisable to stretch it on a frame in the same way as a piece of embroidery, and in that position to trace out upon it any de-

sign which may have been selected. The best way to obtain the design is to prick it out after laying it face downward on the material, then dust it with colored powder tied up in a thin bag, and then go over it lightly with a pencil. For coloring such shades, transparent colors only should be used ; for the reds, shades of carmine and crimson-lake ; for the yellows, Italian-yellow and gamboge ; for the greens, verdigris ; for blues, Prussian-blue, cobalt, ultramarine, and indigo ; for browns, raw and burnt sienna, etc. Gold-size is an admirable vehicle for mixing the paints ; it does not stick, and its light tone of amber does not affect the purity or beauty of the colors. It is well to mix the colors first with turpentine, and then add the size.

If much difficulty is experienced in drawing the design, it answers well to select a good engraving, and, after varnishing the transparency, while it is still wet, apply the engraving, which should be thoroughly dampened, to the surface, pressing every part of it on to the muslin. While it is wet, the paper is carefully removed by rubbing and rolling it off, as it were, until only the cuticle of the engraving remains. The transparent colors will work on to the engraving well, the shadows of the picture answering for the deeper tones of the colored shade.

Some home-workers find it extremely difficult to transfer designs, and waste a good deal of time in unsuccessful attempts, for which reason we suggest as a very useful occupation, and one which becomes extremely interesting, a consideration of the best method of accomplishing this very necessary detail of all ornamental needle-work. The first thing to be done is to take a tracing of the design selected. Paper for the purpose can be bought at any art store, and will be found tolerably stiff and yet perfectly transparent. This is placed over the design and secured with pins at each corner, and the lines of the design are drawn over either with a pencil or pen and ink, the latter being decidedly the

best. The glossiest side of the paper is the one on which the tracing should be made. Black transferring-paper is next needed. This can be home-made by simply scraping black French chalk over one side of any thin white paper that may be at hand, and rubbing it in with a ball of cotton-wool until it will not come off without a good deal of trouble.

The tracing-paper on which the design has been outlined is now laid upon the material over the exact spot, and temporarily secured in position by pins. The set-off paper, as that rubbed with charcoal is called, must then be passed under the tracing-paper, the black side downward. Pins are again needed to keep both perfectly flat. Then, with a blunt-pointed instrument, such as a crocheted-needle or ivory tracing-point, made for the express purpose, every line of the design must be gone over, the instrument being pressed just enough to cause the lines to appear on the surface of the material on which the work is to be executed, and it is very necessary in going over the lines of the tracing to hold the tracing-point as upright as possible, so that the lines transferred may be fine and uniform.

If the material to be worked is of very yielding quality, such as velvet, plush, or cloth, there is a better method, known as "stenciling," which is very easily learned. The paper which is to form the stencil pattern should be of good, stout, smooth writing-paper, not too thick, but by no means too thin. This paper must be painted over with copal varnish, obtained at the store for artists' materials, and the brush with which it is done should be a flat one of hogs' hair, about an inch in width, which should be thoroughly filled with the varnish and held perfectly upright, great care being taken to spread the varnish equally over the surface of the paper by working the brush in cross directions. The paper must be left on the board to dry thoroughly, and, at the expiration of three or four days, if the materials used have been good, it will present

a glossy appearance and be nearly transparent. It is now genuine stencil-paper, and can be used in the same way as tracing-paper for tracing the lines of the design in pen and ink ; and when these lines are perfectly dry they are pricked through by the use of a fine stiletto. To have the holes free from projections on the reverse side, it is well to lay the paper upon a blotting-pad during the operation of piercing, and it is better not to pierce the holes too close together. The stencil-paper is placed over the material exactly as the “set-off” paper was, and brushed over with Chinese white paint, bought in bottles, the brush used being what is called a velvet-painting brush. The paint is rubbed on a palette and allowed to dry, and the brush, squeezed as dry as possible, is rubbed into the color, and then worked, being held perfectly upright over the stencil, care being taken that every part of the design is gone over. The brush should be only lightly pressed, sufficiently to make the points of the hairs pass through the holes in the design, but not to bend under the stencil, as in that case the pattern would be blotted.

Stenciling is an art which can be used in many ways. In early days it supplied the place of papering for walls, and journeymen called at houses in the country with their stencil designs and paint-pots, and speedily covered the bare walls with designs ; and while we are scarcely prepared to advocate stenciling upon this scale as a home occupation, we have said enough to show how easily a knowledge of it can be acquired, and how satisfactorily individual taste may supply opportunity for its use.

In the very matter of fans, stenciling would produce pretty effects if water-colors were used instead of dry paint ; and designs of all kinds could be colored in this way upon linens or muslins.

Brass stencilings are also easily made, and are, of course, more durable. The material for the purpose is sold at the

artists'-material stores, and is easily penetrated by a stiletto ; but the back requires filing to get rid of the roughness round the holes.

Card-board stencils form a very good foundation for shell ornamentations, and that reminds us what great possibilities there are in the use of shells to while away leisure hours.

Many people collect them in their summer excursions, and after a while they accumulate, and it becomes a question what use to make of them ; but they can be turned to very good account in the way of decoration. If they are to be used for this purpose, it is, first of all, necessary to cleanse them thoroughly. In the case of the larger varieties, this can be done effectually by soaking them for twelve hours in fresh water, while for the small or more delicate kinds it is well to use a soft brush, which will reach all the interstices and yet not injure the beautiful markings of the epidermis.

The easiest way to make use of shells is by sticking them on to any article which it is deemed desirable to decorate, while the most difficult and delicate use for them lies in making shell-flowers, when, so long as the natural color of the shell is retained, very beautiful results can be produced, but which become vulgarized to the highest degree when any attempt is made to copy the coloring of natural flowers. Manuals have been written upon this branch of the art ; but we propose to pass it over lightly, and dwell more particularly upon the simple use of shells in their original tones of color.

For ornamenting brackets, boxes, pincushions, or baskets, it is only necessary to select the shells and have ready a strong cement into which they can be set. This cement is best made by mixing gelatine and plaster of Paris with white lead, making a paste thick enough to support the shells, but not sufficiently heavy to seem clumsy or lumpy. The shells can be so arranged as to show sometimes the

whole of the upper surface, and sometimes only a portion of it. The cement may be colored as desired by adding dry color, blue, red, or yellow, when mixing. The foundation for shell-work need not be very strong, the cement itself being as durable as the hardest earthenware. A strong bracket could be easily made of stout card-board or pasteboard, well coated with cement, the shells being sunk into it while it is wet. Some people varnish the shells over with dammar varnish, but this gives them something of a vulgar look.

Handkerchief-boxes, baskets of all kinds, shelves, pedestals, work-boxes, writing-cases—in fact, almost any article can be decorated with shells in the simple way suggested. Shells of all kinds are to be bought for very low prices, the smaller ones—rice, pearl, snail shells, etc.—by the ounce, and these are very useful for filling up the chinks and crevices.

Making shell-flowers is, of course, a more difficult occupation, and small, smooth, polished shells should be selected for the purpose. The best way to proceed is exactly as in forming paper or wax flowers—by making a center on which to arrange the stamens. This should be of the cement for which we have given a recipe, and, to make it more adhesive, a little gum tragacanth can be added. In making a rose, for example, the foundation-ball should be about the size of a hickory-nut, rounded a little toward the apex, upon which three small shells should be pressed. Around them a row of four more is placed, then one of six, then of eight, and so on until the outer edge is reached, and for this the large, light shells are taken, some turned convex-side inward. These outer shells should be half an inch long. The calyx is made of thin, pointed shells, arranged round a seed-pod molded in cement, or an artificial calyx may be bought. To make a rose-bud it is only necessary to mold the cement into an oblong ball, and press around it three small shells,

placing over them others of oval shape. We have already stated our objection to the artificial coloring of shells, but, as every one may not hold the same opinion, a few words upon the process may not be objectionable. For those, then, who wish to make shell flowers, in imitation not only of form but of tints, the approved method is to dip each shell separately into liquid color, made by rubbing the colored powders into gum-water, the smaller shells being always more darkly tinted than the larger ones. For cutting large shells to the desired shape and size, a small Sorrento saw is necessary, while to varnish them when colored, dammar varnish is used. Gilding can be applied exactly as suggested for frame-work. The directions given for wax and leather flowers will be suitable for those formed in shell, making due allowance for difference of material, and for the fact that it is impossible to use molding-forms for shells, and that ingenuity in making them consists rather in the selection of fitting shapes and sizes, and in the cutting and trimming larger ones to serve the more delicate purposes of smaller ones. Venetian shells, which can be bought at fancy stores, with little holes already drilled in them, are useful for trimmings, making pretty necklaces and armlets for children, and in card-board work are efficient as decoration. Large shells, such as clam- or mussel-shells, make admirable pincushions ; and as these shells are occasionally objectionable from the strong smell that clings to them, they can be purified by washing the insides with a weak solution of chloride of lime. To form a pincushion, a bag is first made the shape and size desired, and stuffed with bran, cotton-wool, or emery-powder, and then tightly covered with silk, satin, velvet, or plush ; the shells, which must be of equal size, are then covered with strong gum on the insides, or glue may even be necessary, and held tightly pressed against either side of the cushions. Painting on shells is a popular occupation, and can be employed on the

inside or outside, as desired. Clam-shells are particularly well adapted for little seenie views, painted in water-eolors, and, if they are well done, there is no prettier decoration for a shelf or bracket than that of shells handsomely painted by hand and varnished over.

The many branchees of painting do not eome exaetly within the seope of our intention, for, usually speaking, they are pursued either methodieally as arts, or taken up for amusement ; but there is one branch of painting whieh forms a very suitable and very favorite oeeupation for leisure moments, and that is the art of illuminating. Designs, texts, and proverbs are all to be bought ready for coloring, and very little study or knowledge are required for eompleting them. Any one can color an illumination, however unskillful he may be in designing one. The designs for illumination which are sold in stationers' stores are usually on Bristol-board, and vary, of course, in style and size. We will suppose that such a design has been purchased all ready for coloring, as the art of originating, or even eopying, a compleiated design would necessitate more than a slight knowledge of art, and would hardly be attempted as a mere occupation. Some knowledge of the best colors for seleetion will be valuable to all who undertake illumination, and we therefore subjoin the practical suggestions made by an expert on the subjeet. The most useful colors are blues (cobalt, French, and indigo), Indian-yellow, yellow oehre and lemon-yellow, rose-madder, earmine, vermillion and light red, emerald-green, silicea-green ; for black, use Indian ink, lamp-black, or ivory-black. To make good greens, mix cobalt and yellow oehre, indigo and Indian-yellow ; for grays, Indian-red, yellow oehre, and French blue mix well ; while for very delicate pearly gray, rose-madder, emerald-green, and cobalt-blue should be mixed. Crimson lake will answer instead of earmine, but will not be quite so brilliant. For lilac, cobalt and rose-madder mix together well. It is

well to avoid using colors that fade rapidly, such as gamboge, Prussian-blue, chrome yellows of all kinds, orange-lead or orange-vermilion. To glaze and give depth to colors, use, if it can be procured, Reeves's wax water magilp, and, if it can not, any glazing medium recommended at the artists'-material stores. It should be either mixed with the colors and used in painting, or applied afterward as a glaze. For gilding, shell gold is excellent, or the liquid gilding sold ready prepared will be found a good substitute. Many people use gold-leaf, but it is very difficult to lay it on. To imitate silver, aluminum is sold in small cakes, and is excellent for grounding or for intricate outlining and scroll-work.

Very little difficulty will be found in the mechanical mixing and laying on of colors, and every one knows how much illuminations brighten up a bedroom or a nursery wall. For those who are ambitious of producing good effects with even less effort, and who undertake the decoration of school-rooms or churches in country villages, there is a very easy and economical way, which will commend itself at once to our readers. Letter-forms can be bought at church furnishers in all styles—the Roman, the Norman, the Gothic, or whatever may be wished—and copies of these letters can be cut out in ordinary glazed paper, in different colors, to form words and sentences, and then pasted perfectly even at regulated distances upon well-stretched linen. If shaded paper is used for this purpose, the effect of relief is produced, and this method of decoration will be found admirably adapted to high positions, as from a distance it is impossible to tell that the letters are not painted. An equally effective method is that of outlining the forms of the letters in pencil upon the linen, and then, with ordinary house-painter's colors and a thick brush, giving them the necessary coloring, only observing a little care in keeping the edges even. Stenciling can be admirably used in this way.

All sorts of fascinating work of this kind can be taken up as occupation on wet days ; and, without going into the question of floral decoration, we may remind our readers how much can be done with evergreens and moss, and of the many possibilities that flags and banners afford for easy and effective work.

To discuss the question of fancy needle-work thoroughly would require a volume ; but, in spite of the interest felt in painting of all kinds, in spite of the beguiling delight of ceramics and faience, tile-painting and painting on glass, the votaries of fancy work are almost as numerous as ever. In addition to the decorative needle-work of the day, crochet, tatting, knitting, and netting, all find a place. Lace-making has many enthusiastic votaries, and marvels are achieved in it, whether in fine pillow-lace, which is enough to ruin the strongest eyesight in the world, or in the coarse Macramé lace, or “fringed work,” as its Arabic name signifies, which deserves more than passing attention at our hands. An ordinary deal-topped round table, covered with cloth and finished off with a handsome fringe of Macramé lace, is at once an effective piece of furniture, and, although there may be some objection to the handling of the coarse, strong linen of which Macramé lace is made, with care it need never injure the most delicate hands. The linen thread which is used for it is bought for one dollar a pound, and is known as Barbour’s flax. It can now be procured at almost any fancy store. Tables upon which to make the lace can also be bought for three dollars each, but these are quite easily made at home ; a plain piece of board, with a row of nails at the top and sides, is all that is necessary. Large pins for interweaving the threads can be bought for a mere trifle. There are few more effective lambrequins for mantels or brackets than a broad Macramé lace with heavy fringe, and it is very useful in making bags, reticules, etc. Coarse crochet, done in twisted cord of

deep coffee-color, is a still easier style of work, and the twisted cord can also be bought at fancy stores, with directions for making various patterns. Crochet in thick wools is always useful, and those who are handy with crochet-needles are never at a loss for an occupation. Pincushion-covers in crochet or tatting are always pretty, and the English pincushion, as it is called, amply repays the little trouble it involves. A round pincushion is made and stuffed, a hollow being left in the center large enough to hold a small tumbler, a firm piece of card-board being placed at the bottom. A covering of fine crochet or tatting, with a deep fringe, serves for decoration, and the little tumbler is kept filled with flowers, which bid a smiling welcome to the tenant of the bed-chamber.

Excellent pincushions, too, are made out of old cigar-boxes, the inside being lined with fancy paper or pink cambric, and a frill of the cambric being put on very full all round the outside. The lid must also be lined, and the outside covered with a well-stuffed pincushion, while the crochet or lace cover, made to fit it, makes it a pretty as well as a most useful article for the toilet.

Ladies who are fortunate enough to possess sewing-machines (and who nowadays is not?) can find a pleasant occupation in quilting. Quilted satin bags or reticules, handkerchief-cases, stands for rings or brooches, are always acceptable as gifts. And we are reminded how much occupation some persons find in the making of inexpensive gifts, valuable only for the care and time bestowed upon them. Common bed-ticking forms an admirable foundation for many such useful articles, and fancy stitches worked upon it in flannel or crewel look remarkably well. It is perfectly wonderful to see what really handsome things clever fingers will make out of the most ordinary material. Take, for example, straw. Straw frames we have already alluded to, but we have recently seen an application of straw to a

useful purpose of which we had never thought, and that was in the trimming of black net or lace dresses, the straw being bought in all sorts of tiny shapes and forms, and worked on to the material exactly as beads might be, excepting that each little piece is laid down and stitched through with straw-colored silk. Black net scarfs, with the ends embroidered in this way, are very pretty indeed, and flowers for black dresses can be very effectively remodeled by this means.

Then there is straw-plaiting. Lengths of willow ready prepared can be obtained of any store where milliners' materials are kept, and it is easy to plait it in a threefold plait, the only art lying in pressing each fold as it is worked perfectly flat with the thumb. These willow straws are all sold of one length, and a sufficient number are sent in each bundle to make a hat or bonnet. When the plaiting is ready, it is sent to a milliner's to be pressed and shaped, and the result is an exceedingly light and pretty bonnet or hat. Straw is, in fact, a very useful article, and one that is subject to a good deal of experiment. It gilds well; a piece of very unequal and uneven plaiting made up over a shape, gilded and varnished, will turn out a most respectable article of decoration, and, if filled with a glass, will serve admirably to hold flowers.

Straw and wheat-ears together afford invaluable occupation for busy hands. Straw baskets are easily made by cutting straw lengths all of equal size and fastening them upright into a circular piece of card-board, either by gluing them or by fitting them into holes made for the purpose about a quarter of an inch apart. A rim of card-board, which should be one third larger than the foundation, is punched with the same number of holes, each of which is touched with mucilage before the straw is introduced into it. Bright ribbons are then interwoven with the straws by being passed over and under them, basket

fashion, until the whole is completely covered up. Some of the remaining straws are then split open and pressed, after being dampened, and little loops are formed of these, and tacked round the rim of the basket, first round the outer edge ; then a second row is placed over the first, to hide the stitches, and over the last row a piece of ornamental straw-work, or of chenille, is placed. A handle is formed of card-board, stiffened at the edges with bonnet-wire, and loops of the straw form an ornament to correspond with the basket-rim. Such a basket can be lined with silk and finished off with bows of ribbon, and would make a very pretty receptacle for cards. Individual taste would suggest various improvements, and straws of different colors can as easily be obtained as those of self-color. Numerous things can be made in the same way, a card-board foundation serving to receive the straws, and allowing of a needle passing through where necessary. Match-boxes, little Chinese pagodas, cottages, temples, will suggest themselves, and straw-work will prove a fascinating occupation, even if straw mosaic should never be attempted, which, however, it probably would, for it is a most easy, and at the same time a most effective, way of using this material.

For this work, colored straws in every variety can be bought at fancy stores ; they are imported from France and Germany, but are sold at moderate prices, done up in small bundles. Every tone and tint is obtainable in them, from the delicate self-colored straw to the most brilliant scarlets, blues, and greens, some of them even being coated over with gold- and silver-leaf. It is quite possible to color the straws at home as well as to make them into patterns, and in case our readers prefer to do this, we advise them to order oat- or rice-straw, which must be cut into even lengths above the knots, about six or seven inches in length, and boiled for a couple of hours in clear soft water, then col-

ored with aniline dyes. A foundation for mosaic-work is necessary ; it can be either of stiff card-board or of thin wood. Cigar-boxes would serve the purpose admirably. Whatever forms the foundation must be coated with strong cement made of isinglass dissolved in acetic acid. The design being selected, the straws are cut of the proper size to cover the width or length, as the case may be, and laid in position, perfectly straight and even. A plain, square pattern would be easy as a beginning. It is important, in order to give a regular appearance to the work, that each band or square should be exactly of the same size, for which reason a careful worker will cut out a paper pattern first, and cut the straws to correspond with it. After each piece is cut, it should be laid upon a smooth, hard surface, and pressed with a rather hot flat-iron, it being always wise to place a paper over it to preserve it. The pattern may be formed either by placing the pieces upon the wood or card-board itself, or upon a piece of cloth, and afterward transferring it to the straw for which it is destined. It is a good plan for a beginner to commence with small articles, and in the first attempts at all events to make a diagram upon the surface to be covered, and to paint each square and block in the colors which will be selected for the straws.

When the pattern has been decided upon and arranged, the next thing needful is to wash the surface to be decorated with heavy cement, made, as suggested, of isinglass and acetic acid. The grounding and little square pieces must be carefully placed in position on the cement. To do this, a bit of pointed stick is needed, which can be dipped in cement and used to pick up and place each little bit of straw, which could not be so well managed with the fingers. When all the pieces are in position, a warm flat-iron must be placed upon them, over a sheet of paper or a smooth cloth. Designs in perfectly straight lines serve well for borderings ; it is easy to arrange the pieces in bands and

squares, and fit them together. Sometimes a central figure is interwoven in the foundation of crossed straws. To accomplish this satisfactorily, the straws must be split and pressed flat. It is not easy to give the effect of relief or carved work in straw ; still it can be done. To accomplish it, the straws must be opened down one side with a sharp knife, then soaked in hot water until they are perfectly pliable, when it is easy to press them flat, so that a broad strip is produced, from which stamen, petals, leaves, etc., can be cut, which, in their turn, can be gracefully arranged upon a surface ready coated with cement, while a foundation can be made of long straws fitting each other end to end. But such work would not be easy, although it might be effective, and we have seen very pretty flowers, buds, and leaves made in this material. Splint-work, as it is called, is only a modification of straw-work. Many articles are made in it, and the material used is simply the split willow which is sold for pipe-lights. It is pliable, can be bought of all colors, and is easily plaited into little basket-like receptacles, or made into frames, or plaited to form mats. Straw mats in mosaic would serve admirably for placing under hot dishes at table. Some persons weave such articles of grasses, first drying and pressing them flat ; and they are far from desppicable.

It is indeed very difficult to limit the inventive genius of people who like to be employed, and to whom an occupation is a necessity. In country homes the most unlikely things serve their turn in providing something to do. Painting on fungi, for example, would not readily suggest itself to a city-bred person, and yet such attempts are really beautiful. We have seen a large fungus, the under surface of which was made the foundation of an exquisite painting, and this was carried out upon the fungus in its natural condition, exactly as it was brought in from the wood. Etching upon this odd natural material is quite common in

some parts of the country, and highly effective; quite astonishing results are accomplished in it.

Of rustic-work we have already spoken in connection with frames; but the remarks we made scarcely exhausted the possibilities of the subject. Liehens are invaluable in such work, forming a beautiful foundation, upon which seed-pods, acorns, and burrs are mounted.

Many English writers have expressed surprise at the use made in American homes of material which in their own country is neglected; for in England rustic-work seldom amounts to more than the decoration of window-boxes with odds and ends of wood, twigs, etc., or the fashioning of baskets, hawked in the street in the lower quarters of towns and cities. Now and then some lover of the beautiful things which lie scattered wholesale in the lovely English woods will achieve a work of the kind; but for the most part it is neglected. In France and Germany, on the contrary, clever hands are always busy in turning to account treasures which cost nothing but the gathering, and many homes are beautified by the use of burrs, seed-pods, and acorns. Any one who is ambitious of good results at little cost can spend a few hours in the early fall in making a collection of such things, and especially of pine-cones, and he will be amply rewarded by the many beautiful articles that can be fashioned from them.

The rustic basket, for example, needs only a foundation shape of strong card-board; and we may add that for all rustic-work the needs, in addition to the material selected for foundation, are onlyopal varnish, a camel's-hair brush, strong needles and thread, tacks, a hammer, and a bradawl. Armed with these, and the treasures collected in some woodland excursion, occupation will be found which will result in many pretty things.

To return to our basket. The shape having been decided upon and the materials collected all ready to hand, the best

way is to cover the pasteboard foundation with strong brown paper ; and, to make a beginning, large cone-scales can be sewed round the edge, the stitches which fasten them being covered by smaller cones sewed over, and continuing thus until a sufficient depth is covered, laying the last row one over the other in such a way that the points of one row always come between the points of the last. The outline, if we may so call it, of the basket being made in this way, and the handle in the same manner, the other treasures are called into requisition, and arranged according to individual taste. Every variety can find a place—bits of lichen, old brown moss, acorns, nuts, pieces of bark, burrs, berries, seed-vessels, anything and everything arranged with taste and care to cover every bit of card-board. Often the smaller articles are best put on with glue, and dropped in the crevices, or stuck over others, as taste may suggest. When all are arranged and thoroughly dried, the best thing is to varnish the work with the copal varnish, the camel's-hair brush with which it is applied being worked into every little crack, corner, or space. Such a basket can be lined with silk or satin, and would make a handsome present ; and, if it is the first piece of rustic-work attempted, it will infallibly lead to more. Different kinds of boxes can be made beautiful by the tasty application of rustic-work, and, as we have said elsewhere, frames in these varied materials are beautiful. An effective one upon which to mount a thermometer or a watch-stand can be made by framing patterns of the pine-cone seeds, and varying them by the introduction of catkins, beech-nut hulls, acorns, burrs, etc., gluing them on.

Rustic-work is specially suitable for brackets, and, if the materials are well selected and arranged, it will have all the appearance of carving in relief. Key-racks, hanging-baskets, mirror-frames, even lambrequins, have all been effectively made by a judicious use of the treasures of the woods.

Individual taste and invention form the only limitation of the uses to which they can be put.

Cocoa-nut shells, again, are among the natural objects that can be pressed into service, and made to afford occupation for busy hands. When the meat has all been extracted, the half-shells can be utilized in many ways. Fastened on to a flat background of polished walnut, they will serve as receptacles for flowers, plants, etc. If placed in an upright position, by the aid of strong glue, or if attached by means of nails and surrounded by acorns, cones, and other rustic articles, they make a pleasing wall ornament. Hanging-baskets are easily made of them, by having a base of wood made, and arranging upon it three half coco-nuts, with holes drilled in the bottom to admit of a screw, by which they are fastened securely in position. "Chasers' cement," as it is called, is the best thing for securing the acorns, etc., to the rough surface of the cocoanut; and, if it is not readily obtained, a substitute for it can easily be made at home by taking half a pound of rosin or pitch, and letting it melt gradually in an iron pot. Into it yellow ochre, in powder, should be stirred by degrees, and a piece of wax the size of a hazel-nut, and a smaller piece of wax melted into it. When cold, this composition can be cut up into bars or eakes, to be used as needed. Upon application to heat, it will readily melt again, and be fit for use. Holes can be drilled in the cocoa-nut shells for the insertion of wire or cord to hang them up, and, if creeping plants are grown in them, the effect will be very graceful and pretty.

Quite a different style of occupation is that afforded by the fashionable Indian painting which the importation of articles from the East has made popular. To those who are not already familiar with it, a few directions may have a value. All that is needed to undertake such work with success is a share of patience, and a little care and delicacy

in the manipulation of the materials. This form of decoration is suitable for tables, stands, boxes, book-racks, or, indeed, anything which presents a perfectly smooth surface. As much depends upon this smoothness of the surface, it is desirable to have it highly polished before beginning the operation of outlining the design.

Lamp-black and turpentine must be mixed in a saucer to the consistency of thick cream, and, after the design to be reproduced has been selected, cut out carefully in white paper, and fastened to the surface of the wood by means of pins, the coloring of the article may commence. The object being to have a perfectly outlined white design upon a perfectly black surface, a small brush is dipped in the mixture of lamp-black and turpentine, and carefully carried round the edge of the design ; then carried further, until the whole surface is covered, with the exception of that over which the design is laid. The first coating of paint must be allowed to dry before a second is laid on. Then the operation must be repeated until a dense black is obtained, and, after letting it dry quite thoroughly, it requires varnishing with the finest copal varnish that can be procured. The paper design must then be removed, and, if it sticks, must be moistened in order to bring it completely away. The design will be found clearly outlined on the black surface, and can be shaded or stippled with Indian ink, dark lines being veined in where necessary. After it is thoroughly dry, copal varnish should be applied again, and when that in turn is dried, the surface should be rubbed thoroughly with pumice-stone ; this in turn is washed off with clear water, and, when dry, the surface is revarnished, and rubbed down with a soft flannel, the process of varnishing being repeated again and again, until a perfect polish is obtained.

It will be seen at once that any design accurately cut in paper can thus be easily reproduced upon a polished sur-

face, and this form of ornamentation can be applied indifferently to any object which presents a flat foundation. If applied to the top of a table, great care must be taken afterward to avoid scratching it, as every mark shows upon the highly polished surface. Leaves, flowers, and butterflies, scattered carelessly over the table-top as if thrown down, look very well in this style of work.

In the suggestions for home occupations which we have offered in this little book, we have carefully avoided all mention of those which come under the head of duty or of amusement, and also of almost all that partake of a sedentary character, as, for example, reading, sewing, or the cultivation of accomplishments. We have restricted ourselves in our mention of the art of painting to that of its application to the ornamentation of readily made articles, and our endeavor has been rather to suggest occupations out of which others might spring than to lay down any definite rules or plans for regular employment. Our field of observation has been necessarily narrowed by these limitations, but we trust that our directions for the occupations suitable for leisure hours may be found sufficiently thorough to assist those who embark upon them in carrying them out to a successful issue.

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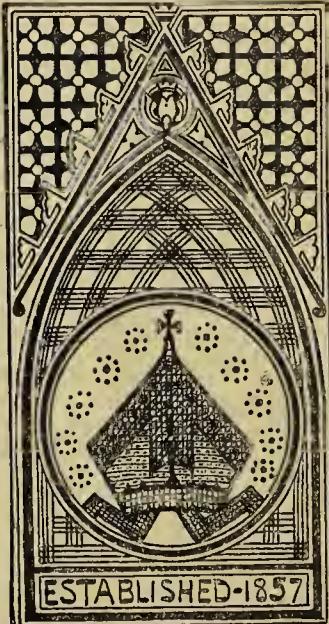
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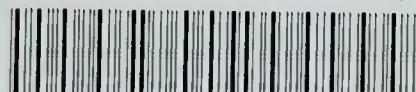
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